STYLE MATTERS: WORSHIP PREFERENCES OF UNIVERSITY STUDENTS REGARDING THE USE OF MUSIC AND TECHNOLOGY

Daniel D. Fultz

A Dissertation
Submitted to the Graduate College of Bowling Green State University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December, 2010

Committee:
Dr. Catherine Cassara-Jemai, Advisor
Dr. Peter Vanderhart
Graduate Faculty Representative
Dr. Stephen Croucher
Dr. Lara Martin Lengel
ABSTRACT

Dr. Catherine Cassara-Jemai, Advisor

As a response to increasingly low rates of participation among university aged students, Christian churches across the country are spending increasing amounts of money on music and technology with the assumption that such expenditures will attract that target demographic. Across denominational affiliations, it is a commonly held belief that such practices must be in place in order to attract and retain this demographic, but this belief has no empirical support. Therefore, this research project investigated the worship preferences of professing Christian students at Bluffton University paying particular attention to the utilization of music and technology. Those who have studied related issues have done so with clearly non-academic objectives, most with pre-existing religious affiliations and/or ties to funding from Christian-based organizations.

The participants of this study were traditional-aged undergraduate students who were enrolled full-time at Bluffton University during spring semester, 2009. Bluffton University is affiliated with the Mennonite Church, USA, but represents many Christian denominations with the top three being: Evangelical, Catholic, and Mennonite. This research incorporated survey questionnaires based on the uses and gratifications perspective.

The intent of the instrument was to measure three areas, as each relates to university student preferences toward the use of music and technology in Christian worship: relationship between technology use and current preferences; relationship between past worship experiences and current preferences; and, relationship between the on-campus religious activities of students and their current preferences. An instrument was developed based on the population being
studied. The total sample was 123 participants, from ages 18-22, with a mean age of 20.00 (SD = 1.21). Of the participants, 43 were male (35.00%) and 80 were female (65.00%).

This study produced two key findings directly related to the research questions. First, students more involved with on-campus religious activities have stronger preferences toward the use of technology and contemporary music in worship. Second, students who report a higher level of technology use in their daily lives have stronger preferences toward the utilization of technology in their worship services. Additional findings centered on differences between male and female students.
ACKNOWLEDGEMENTS

There are many to thank for seeing me through this project. I thank my God, for all things, including this project. I thank my wife, Kenna Kristine, for all of her patience and support, and for helping to create an environment where I can complete this project. I thank my children, Esther Joelle, Naomi Ruth, Hannah Kristine, Talitha Asenath, and Jacob Daniel, all of whom came during my doctoral studies and sacrificed many hours of being with their Daddy so that I could complete this project. I thank my parents, Don and Nancy, for encouragement and for listening. Thanks to my siblings and to my extended family.

I am more than grateful to my Chair, Dr. Cassara-Jemai, for working with me and guiding me through a very difficult process. I appreciate your ability to know when to push, and when to allow space. Thanks also to Dr. Lengel-Martin, who has been with me from the beginning of this project and has always offered a listening ear and wise counsel. You have expertise in every topic related to this project and fantastic ideas for future research. I am thankful also to Dr. Croucher, who went far beyond any expectation, offering ideas and prompt responses whenever I needed anything. I’ve said it before, and I’ll say it again … You are my Elvis. Thanks also to Dr. Vanderhardt, who came in late and offered a stable presence from the first time we met. You are a great asset to this project as well as to your institution.

Thanks to my teachers at BGSU: Dr Boyd-Barrett, Dr Burke, Dr Coomes, Dr Demuth, Dr Duntley, Dr Gajjala, Dr Lin, Dr Melkote, Dr Skinner, Dr Warren, Sara Lawniczak, Kelly Graham, and newly “doctored” Dr Bridget Long and Dr Sue Ellen McCommis.

My thanks to my inspiring and encouraging students at Bluffton University – I do this, in part, so that I might continue to work with excellent minds such as yours. You make my work meaningful. You push me to become better so that I might better serve you. I learn from you.
Thanks to the participants of this study. My hope is that you also gained something from this process.

Thanks to everyone who mentioned a book title, or an article, or offered resources, or provided a different line of thinking. So many belong in this category … for starters, thanks to Dr Quentin Schultze, Dr Alex Sider, Jim King, Steve Renfrow, Paul Osborne, Daniel Hughes, Dr John Warren, Dr Bridget Long, Dr Steve Iseman, and I know there are many more who should be here … you know who you are … thank you.

My thanks to my colleagues at Bluffton University, past and present, too many to name here, but that list certainly begins with Dr Hans Houshower, Dr Bob Pieffer, Dr Eric Fulcomer, Dr Larry George, Ted Bible, Dr Laura Brenneman, Tami Forbes, Dr Lynda Nyce, Dr Darryl Nester, Tobias Buckell, Josh Smith, and so many others. And thanks to my departmental colleagues, past and present: Melissa, Daniel, Sue, Gerald, Wes, and Zack.

Thanks to my “Mighty Men”: Dad, Ted Bible, Daniel Hughes, Paul Osborne, Israel Wayne. I am honored to call each of you my friend.
TABLE OF CONTENTS

INTRODUCTION ......................................................................................................................... 1

CHAPTER I: BACKGROUND ..................................................................................................... 7
    Church-Related Research Organizations ........................................................................... 7
    The Issue ............................................................................................................................ 8
    Church Reaction ............................................................................................................... 10

CHAPTER II: LITERATURE REVIEW .................................................................................... 14
    Religious Communication ............................................................................................... 14
    Fluid Definitions ...............................................................................................................15
    A Brief Historical Perspective ..........................................................................................18
    The Current Landscape and Associated Challenges ........................................................ 21
    New Religious Movements and Cyber-Religion ............................................................. 23
    Uses and Gratifications ................................................................................................. 27
        Historical Development ............................................................................................... 27
        Explanation of Uses and Gratifications .......................................................................28
        Acceptance within the Discipline ............................................................................... 29
        Appropriate and Effective for this Study .....................................................................30
    Youth Culture ................................................................................................................ 31
        Assumption: Youth Demand Technology and Contemporary Music in Worship ..... 37
        Assumption: Youth Do Not Care About Religion ..................................................... 39
    Higher Education ............................................................................................................. 42
    Areas of Exploration ....................................................................................................... 46
### CHAPTER III: METHODOLOGY

- Participants .................................................................................................................. 49
- Population and Research Site .................................................................................. 49
- Respondents to Survey .......................................................................................... 50
- Procedures .................................................................................................................. 50
- Data Collection .......................................................................................................... 50
- Response ..................................................................................................................... 51
- Instrument .................................................................................................................... 51
- Instrument Design ....................................................................................................... 53
- On-Campus Religious Activities Scale ................................................................. 56
- Uses Scale ................................................................................................................... 57
- Gratifications Scale ..................................................................................................... 57
- Difficulties .................................................................................................................... 58
- Summary ...................................................................................................................... 61

### CHAPTER IV: RESULTS AND INTERPRETATION

- Statistical Analysis ...................................................................................................... 64
- Results .......................................................................................................................... 65
  - Research Question 1 .............................................................................................. 65
  - Research Question 2 .............................................................................................. 65
  - Research Question 3 .............................................................................................. 66
- Interpretation ................................................................................................................ 66
  - Research Question 3 .............................................................................................. 66
  - Research Question 1 .............................................................................................. 67
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Question 2</td>
<td>69</td>
</tr>
<tr>
<td>Additional Findings</td>
<td>70</td>
</tr>
<tr>
<td>Involvement with On-Campus Religious Activity</td>
<td>71</td>
</tr>
<tr>
<td>Use of Technologies to Consume Religious Programming</td>
<td>72</td>
</tr>
<tr>
<td>Gratifications from Technologies to Consume Religious Programming</td>
<td>72</td>
</tr>
<tr>
<td>Gratifications from On-Campus Religious Activity</td>
<td>73</td>
</tr>
<tr>
<td>Summary</td>
<td>73</td>
</tr>
<tr>
<td>CHAPTER V: DISCUSSION AND CONCLUSION</td>
<td>75</td>
</tr>
<tr>
<td>Major Findings</td>
<td>75</td>
</tr>
<tr>
<td>Theoretical Extensions of Technology in Worship Settings</td>
<td>77</td>
</tr>
<tr>
<td>Theoretical Extensions of Uses and Gratifications</td>
<td>81</td>
</tr>
<tr>
<td>Different Technology &amp; Different Context</td>
<td>81</td>
</tr>
<tr>
<td>Homogeneous Religious Group Choices</td>
<td>83</td>
</tr>
<tr>
<td>Practical Implications for Religious Leaders</td>
<td>84</td>
</tr>
<tr>
<td>Current Use of Technology in Worship</td>
<td>84</td>
</tr>
<tr>
<td>Charge for Religious Leaders</td>
<td>88</td>
</tr>
<tr>
<td>Future Research</td>
<td>89</td>
</tr>
<tr>
<td>Areas to Improve</td>
<td>90</td>
</tr>
<tr>
<td>Areas of Expansion</td>
<td>92</td>
</tr>
<tr>
<td>Conclusion</td>
<td>93</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>95</td>
</tr>
<tr>
<td>APPENDIX A: INFORMED CONSENT &amp; SURVEY</td>
<td>116</td>
</tr>
<tr>
<td>APPENDIX B: CODEBOOK</td>
<td>119</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>59</td>
</tr>
<tr>
<td>2</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>61</td>
</tr>
<tr>
<td>4</td>
<td>64</td>
</tr>
</tbody>
</table>
INTRODUCTION

Christian churches across the country are spending increasing amounts of money on music and technology based on the assumption that such expenditures will attract a key target demographic--university students (Carson, 2005; Schultze, 2002 & 2004). It is a commonly held belief that such practices must be in place in order to attract and retain these congregants, but there is no empirical evidence to support this belief. Therefore, this research project investigated worship preferences of students at Bluffton University who professed to be Christian, paying particular attention to their utilization of, and interest in, music and technology. While some debate about the trend exists, it tends to center on issues of how to use these methodologies more effectively rather than asking whether young people are interested in technology or specific music styles in their worship services.

Little research has been done examining the preferences of this demographic group within Christian worship, and what research there is has been conducted with other than academic motives. The scant research in related areas tends to be conducted by non-academic organizations bent toward specific goals of proselytizing. University-aged youth have low levels of church attendance and in an attempt to increase those numbers churches implement changes to their worship services—changes they assume will attract students.

Anecdotally, the modern Christian church in the United States focuses much of its energy on recruiting new participants. Conversations regarding the use of music and technology tend to center on how to attract new members rather than on how to serve, build or maintain an existing community, and congregations increasingly hire marketing consultants to guide them through this recruiting process (Cho, 2005). In both conversation and popular writings there is a great emphasis on the specific demographic of the university student (McLaren, 2001 & 2004; Myers,
While young people brought up in a church setting are leaving as they enter their college years (Barna Group, 2000, 2001, 2002, 2003, 2005, 2006, & 2007; LifeWay Research, 2007) it is less clear why. Many churches respond to the declining attendance rates by altering their worship services to include new technologies and more contemporary styles of music. However, key assumptions regarding youth preferences toward music and technology remain untested and few seem to seriously consider or question the notions before advising how to make the plunge (Eason, 2003; McLean, 1998). Since the core question behind this study involves preferences related to media usage, the uses and gratifications model is an appropriate theoretical construct.

The theoretical approach of uses and gratifications assumes that audience members are self aware of their motivations and satisfactions regarding media consumption (Katz, Blumler, & Gurevitch, 1974), that such consumption is an intentional act performed for a specific purpose (Rayburn, 1996), and that audiences can self-report their preferences and satisfactions (Lin, 1999). Previous theories understood participants as passive slates for media outlets (Rubin, 2002; Ruggiero, 2000), whereas uses and gratifications focuses on the consumer’s goals and satisfactions (Katz, Blumler, & Gurevitch, 1974). Uses and gratifications is more interested in what people do with media and why as opposed to what media consumption does to people (Rubin, 2002). The focus on the audience, self-awareness, and self-reporting made this an appropriate perspective for this study focused on university preferences toward the use of music and technology in the context of Christian worship.

To be sure, at least several audiences are interested in this question and how it relates to deteriorating attendance of young people in churches. Such declines matter because, as Taylor & Seidman (2007) point out, all of the Great Awakenings in American history have taken hold
through youth culture. From trends as passing as art and fashion to political movements such as civil rights, Taylor & Seidman argue that the patterns and momentum are evident in youth culture. Coomes & DeBard (2004) also note that younger generations have powerful effects on the larger culture, in their case, in the development on higher education policies. The same can be argued for the context of religious practice. Three phenomena can be observed: a drop in church attendance, a rise in the use of web-based resources for religious expression, and the increasing use of presentational technologies and contemporary music in Christian services. A study considering these phenomena produces important information for its participants, the professionals involved with church and related organizations, as well as academics across several disciplines.

Since religious organizations, like work organizations, serve as socializing mechanisms (Berger & Luckmann, 1966), the challenge of attracting and retaining these young people as members of an organization might well provide points of interest for scholars interested in other cultural trends, organizational communication, university students, music, and technology, among other areas, as well as adding to the increasing body of work in religious communication. This exploratory research offers a framework for studying these issues. In these ways, this study contributes widely to academia. Additionally, it encourages participants to think critically about their preferences and exposes them to considering those preferences with a scientific understanding, while yielding empirical data for professionals and church leaders interested in the preferences of young people. Therefore, this study simultaneously contributes valuable information to those non-academicians making assumptions about young people, to the body of knowledge in academia, as well as to those participating in this study.
The background section focuses on three main sections. First, the church-related research organizations are briefly described, and then the issue is detailed followed by the church reaction to the issue. It is noted that there are predominantly three organizations conducting research in related areas, and each is open about its connections via funding and philosophies to church organizations. The core issue is that young people are not attending Christian worship services, and many churches react to this issue without any empirical data to support their assumptions. Congregations are purchasing technology to allow for more contemporary styles of music as well as digital projection in an attempt to attract and retain young people in their services. This section considers opinions from internationally-known writers as well as local pastors.

The literature review is broken into five main sections: religious communication, new religious movements and cyber-religion, uses and gratifications, youth culture, and higher education. The section begins by recognizing the rich empirical groundwork of religious communication. The scholars cited demonstrate the complexities of developing perfect definitions in terms of religious affiliation, and offers an historical perspective and insight into the current situation. While current trends were addressed in the background section, here the focus is on scholarly research that informed this study.

The next section demonstrates that current scholarship addresses related issues, but has yet to focus on preferences of university students regarding worship practice in the context of a church setting. Rather, current studies concentrate on new religious movements, cults, and online religious activity. This section finishes by noting an increasing call for research into the area of music and technology as they relate to youth preferences.

The next section focuses on the uses and gratifications model. A brief discussion of the historical development of the perspective is followed by an explanation of the theory. The focus
turns toward recent usage of the perspective and ends by demonstrating why uses and gratifications was appropriate for addressing questions regarding the preferences of university students toward music and technology in the context of Christian worship services.

Next, the literature review moves toward studies focused on youth culture and on higher education. General agreements are presented as they relate to music, religion, and technology in the lives of young people, most notably that youth culture is deeply connected to music and technology, and to the extent that they are interested in religion, their views differ from preceding generations. Applications of recommendations from Strauss & Howe (2007) for dealing with millennials in higher education are considered in light of youth church attendance, and assumptions connected to these options are addressed. Additionally, there is some support for the notion that youth do care about religion despite declining church attendance.

The last section of the literature review notes lessons to be drawn from studies in higher education. First, such studies demonstrate that assumptions regarding technology must be tested, and that such testing provides better understandings and utilizations of technology practices. Further, scholars demonstrate that impetuous implementations of technology resources have the tendency to affect the content of the material. Finally, such studies seriously question the assumption that young people demand alternative delivery methods.

The methodology chapter describes the research site, the participants, the instrument, the variables, the tests and the coding for this project. Surveys were placed in the campus mailboxes of each traditionally-aged fulltime undergraduate student at Bluffton University. Exploratory factor analysis was conducted, which yielded factor loadings for each item on the survey.
The results chapter highlights key findings directly related to the research questions. Additionally, the chapter reveals unexpected results from the survey, centered on differing preferences between male and female students. Brief interpretations follow each finding.

The discussion chapter details the reasons that this study matters. The chapter addresses each of the research questions and other important findings gained from this research project. Additionally, ideas for future research projects are presented.
CHAPTER I:
BACKGROUND

Goodstein (2006) reports that “evangelical Christian leaders are warning one another that their teenagers are abandoning the faith in droves” (p. 1), and there is some evidence to support this claim. Baucham (2007) cites research stating that “between 70 and 88 percent of Christian teens are leaving the church by their second year in college” (p. 10). The Barna Group (2000) found that teen attendance in worship services “far exceeds the participation level among adults” (p. 2) at about 70 percent per week, but drops to about 30 percent once they no longer live with their parents. A related study reveals that while more than 80 percent of teens attend weekly worship services for at least two months during their teen years, more than 60 percent are completely disengaged with Christianity during their twenties (Barna Group, 2006b). Within the 31 percent who do attend church weekly in their twenties, only 22 percent continue their weekly attendance during ages 25-29 (Barna Group, 2003).

This background section highlights the issue of young people not attending church based on findings from popular and professional sources. First, this section notes that existing research is predominantly conducted by church-related organizations. Next, the issue is defined and detailed. Finally, the church response is presented including the experiences of local congregations focused on attracting the participants of this study.

Church-Related Research Organizations

There is currently little research into the preferences of young people regarding the use of music and technology in worship, and the scant research is tied to non-academic motives. Three primary organizations conduct research in this area and all make it clear that they are directly funded by and connected to Christian organizations. They are each equally unequivocal that their
purpose for conducting their research is part of a wider goal toward evangelism. Perhaps the most widely cited in Christian circles, the Barna Group (2007), stresses on its website that “The ultimate aim of the firm is to partner with Christian ministries and individuals to be a catalyst in moral and spiritual transformation in the United States.” The Barna Group is unambiguous about its goals and biases. The other two organizations also openly display their Christian connections and aspirations. The second, the Alban Institute, notes on its website “if you want to move the world, move a congregation.” The Alban Institute self-describes as a resource for Christian congregations. The third is LifeWay Research and is the research arm of the Southern Baptist Convention. Each organization is tied to churches in both funding and philosophy.

The Issue

Current research demonstrates that university-aged youth display low levels of church attendance and that many congregations implement changes to worship services in an attempt to attract them to their worship services. According to LifeWay Research studies (2006), nearly 70 percent of 16-year-olds attend worship services at least twice each month, but that number drops “sharply at ages 17, 18 and 19, with only 31 percent attending at age 19” (p. 3). The number of attendees slowly begins to climb again at around age 22. Subsequent LifeWay Research (2007) found that “70 percent of young adults ages 23-30 stopped attending church regularly for at least a year between ages 18-22” (p. 1). While the research above illuminates the dimensions of the problem, such research offers no empirical evidence as to why young people are not attending. Instead, there are only unsupported assumptions regarding their worship preferences and expectations (Bausch, 2002; Eason, 2003; Miller, 2004).

This type of research shows that young people are not committed to attending Christian services in the conventional sense, but it does not point to any lack of interest in Christianity.
(Carson, 2005). Those between the ages of 16-29 are more critical about Christianity than previous generations (Barna Group, 2007b, p. 1). On a related note, growing numbers of both baby boomers and young adults are finding higher levels of satisfaction in home churches rather than traditional forms of church (Barna Group, 2007a, p. 2). Home churches range from a single family to a large group of people, typically meeting in a home or in a space that is not generally designated for worship. Participant views and leadership vary widely, as do the purposes for participation. The interest in home church grew from one percent of adults weekly attending this type of service in 1996 to nine percent in 2006 (Barna Group, 2006a).

Simultaneously, the use of the Internet for religious experiences is rapidly growing. The Barna Group (2007c) found that 26 percent of teens learned something about their faith in the past six months. Additional research shows that 16 percent of adults use religious websites sites every month (Barna Group, 2005a). Sweas (2007) points to a small but growing number of Second Life (an online virtual world) users who send their avatars (computer-generated iconic representations) to various churches. Additionally, she cites the visitors of the exclusively online St. Pixels Church as finding their online worship experiences as being equally satisfying as their visits to local churches. Wisehart (2006) also sees such trends, noting that “digitally-driven options are increasing for all kinds of churches” (p. 6). Based on one study, the Barna Group (2001) projects that “within this decade as many as 50 million individuals may rely solely upon the Internet to provide all of their faith-based experiences” (p. 1). Therefore many congregations have reacted by incorporating technology and contemporary music into their worship services in an attempt to attract and maintain the target demographic of university-aged students.

The previous section describes the issue from the perspectives of both academics and non-scholars. While university-aged students demonstrate low levels of participation in
traditional church attendance, they simultaneously display increasing levels of interest in online resources focused on Christianity. This next section shows that many congregations argue that investing in technology and new styles of music are the means to bring young people to their churches and also the means to keep them there.

Church Reaction

One widely-held view is that young people demand the visual excitement of digital presentation and the auditory excitement of a more contemporary style of music rather than the use of traditional hymns (Bausch, 2002; Eason, 2003; Jewell, 2002 & 2004; Miller, 2004). For some (Kimball, Crowder, & Morgenthaler, 2004), movement in this direction is inevitable. For others (e.g., Sample, 1998), the move is simply a matter of thinking progressively about modern culture. Wisehart (2006) argues that many churches “think so progressively about technology [because] many are in the enviable position of being both non-profit and able to generate ready funds for the right project” (p. 6), and many congregations do have large budgets and are willing to spend on technology (Schultze, 2004). For example, in 2000, less than 40 percent of Protestant churches utilized large-screen projection systems, but by 2005 that number had grown to 62 percent with the largest growth of 85 percent occurring in the Midwest (Barna Group, 2005b). This particular trend is especially important since the research site of this project is in the Midwest, and locally these same trends are observable.

Two pastors from two different local churches described their transitions into the use of contemporary music and visual projection during their worship services. Steve Refrow serves as Pastor of Bluffton Baptist Church and also as the Second Vice President of State Convention of Baptists in Ohio. Jim King is Co-Pastor of Ebenezer Mennonite Church and his church, like Bluffton Baptist Church, it is located in Bluffton, Ohio.
Bluffton Baptist Church began using digital projection and contemporary music styles in 2004. Their pastor notes that they enacted these methods in an attempt to attract college-aged students, but that “numbers are actually down since the change,” from approximately one-hundred per week to about seventy per week (Renfrow, 2008). Nonetheless, the leadership of his church believes they need to “stay the course of blended music” and that they “do not go back to hymns only.” Renfrow also mentions that older parishioners have reacted “favorably” to these changes, but have simultaneously expressed the need to have the services “more polished” (Renfrow, 2008). The co-pastor of Ebenezer Mennonite Church also said their main motivation for utilizing such methodologies was “to attract young people,” but said it was “hard to know” if the changes have been effective. Like Bluffton Baptist Church, the leadership and congregation are highly supportive of the decision to include more visual presentation and contemporary music (King, 2008). In other words, while there is no evidence that youth desire the incorporation of such methods in their worship, and there is no evidence that they respond to these methods, those making decisions continue to appropriate both financial and human resources toward this direction.

Schultze (2004) notes that congregations spend a great deal of time, energy, and money on the implementation of new technologies. For his congregation, Renfrow (2008) calls the initial investment “high, at about two-percent of the total annual budget” but is pleased that they were able to make these changes “without hiring additional staff.” He estimated that various volunteers at Bluffton Baptist Church spend about three hours per week preparing technology resources for use in worship services, but believes they need to spend more time. Refrow (2008) would like to see more video utilized, as he believes that “video clips are the modern version of parables.”
King’s (2008) situation is similar. At Ebenezer Mennonite Church, staff members spend “a few hours a week” (King) on technology components of their service, and occasionally much more time on specialized video projects. They also plan to increase the amount of time spent on this portion of their worship service, and expect to purchase at least three new projectors, automated screens, and completely new audio systems (King). These Midwest congregations are embracing new technologies and more contemporary styles of music in their worship services. Although some debate regarding these changes exists, it is not centered on data gathered by empirical research. The debate concentrates predominantly on how to best utilize the methodologies.

Several writers (Barna, 2002; Herl, 2005; Long, 2001; Myers, 1989; Siglin, 2006; Robinson, 2007) describe a debate over these methodologies as a *worship war*; however, they tend to agree that one side has declared victory. Those who argue that congregations must adopt new technologies and more contemporary styles of music have declared themselves winners (Long, 2001; Robinson, 2007), and others simply need to catch up. One argument is that since the culture moved this direction the church needs to follow in order to be relevant (Kimball, Crowder & Morgenthaler, 2004; McLaren, 2001 & 2004). Myers (1989), admitting that it may sound extreme, believes that “the challenge of living with popular culture may well be as serious for modern Christians as persecution and plagues were for the saints of earlier centuries” (p. xii).

The debate focuses on how to better utilize these methods rather than on whether or not they are desired by young people. The Barna Group (2002) plays down the idea of worship wars, offering multiple services as the solution. Robinson (2007) urges congregants to view the issue “as a new time of learning, of deepening faith, and of a great and godly adventure.” Long (2001) attempts to refocus the issue as being about worship, and therefore refocuses attention in that
direction. Malefyt & Vanderwell (2004) follow Long to some degree, but in a context that follows a *how to* manual.

*How to* books abound, focusing mainly on the mechanics of technology (e.g., Bausch, 2002; Eason, 2003; McLean 1998; Miller, 2004; Wilson, 1999) but seldom consider long-term implications to the congregation. Clark (1994) briefly looks at how music affects congregational character and worship experience, Malefyt and Vanderwell (2004) consider technology use in collaborative worship, and Jewell (2002) addresses some political ramifications of technology-based changes in the congregation, but all are predisposed to the incorporation of such methodologies. Siglin (2006) begins to ask if the methods are necessary, but quickly retreats, offering little more than overly simplified solutions such as staying open to change.

Occasionally, an author such as McLaren (2001, 2004) will discuss culture but ultimately joins others (Jewell, 2004; Wilson, 2000; Wilson & Moore, 2002) who have already decided that young people require visual and musical excitement in worship. In the same vein, Kimball, Crowder and Morgenthaler (2004) argue that since the 18-35 year-olds are missing from church, congregations are obliged to incorporate a variety of music and presentation in order to attract them. Sample (1998) demands that churches “join the practices of an electronic culture” (p. 122) urging congregations to embrace any available technology, primarily arguing that the availability obligates a church to do so. But while the topic absorbs many authors and church leaders, no empirical research exists which asks university students if such methodologies will attract them and keep them in a specific congregation.
CHAPTER II:
LITERATURE REVIEW

Given the interdisciplinary nature of this study, several topics and academic areas are explored in this literature review, including religious communication and related fields, as well as studies centered on youth culture, and from the realm of higher education. The notion that youth demand such accommodation lacks any empirical evidence from an academic perspective.

The chapter begins by acknowledging the rich history of religious communication and related scholars whose empirical inquiry offers definitions, historical perspectives, and insight into the present situation. The section that follows notes that while there are a few intermittent studies relating to music and technology in the church, most focus on online religious activity and on new religious movements (NRMs), with specific attention to the emerging church movement. Scholars are cited as calling for research into the intersections of music, technology and Christian worship. Following these sections are studies focused on youth culture and on higher education. Some clear trends are observed, most notably that youth culture is deeply connected to music and technology, and to the extent that they are interested in religion, their views are different than preceding generations.

Religious Communication

As a whole, scholars of religious communication and related academic disciplines have yet to tackle the specific issue of university student preferences toward the use of music and technology in Christian worship. That is not to say that previous scholarship leaves the issue altogether. Rather, several religious communication scholars have paved the way for this type of inquiry. Their tradition of empirical inquiry offers appropriate definitions, as well as an historical perspective and insight into the current situation involving the use of music and technology by
Christian groups. This section addresses the difficulty of defining terminology such as religious affiliation, and even with terms such as music and technology. Next, particular attention is paid to the historical discourse regarding music and technology in the context of modern Christianity in this cultural setting. Finally, the current situation is presented from a scholarly perspective. While current trends are also addressed in the background section, the scholars highlighted here present the academic perspective of the issue.

**Fluid Definitions**

To be sure, presenting an all-encompassing definition of *Christian* or of *church* is not the focus of this project. The goal of this section is to present definitions that will be used specifically in this project. It is clear that scholars have long attempted to describe communication within religious bodies and movements and have simultaneously worked to establish definitions for various groups (Chidester, 2005). Soukup (2005) argues that Christianity, more than any other religion in the world, has focused on and written about the concept of communication. Schultze (2003) refers to various *tribes* within Christianity, and Soukup claims that the Roman Catholic Church has developed more writings than any other Christian tribe regarding communication practices.

Chidester (2005) attempts to draw distinctions between religion and superstition, between NRMs and cults, but admits that this is problematic, noting that “all kinds of religious activity have been denied the status of religion” (p. 9) due to such attempts. For him, baseball, Coca Cola, and rock ‘n’ roll are not religions, but each exhibits religious activity. Chidester doesn’t particularly focus on technology; rather, he reveals that while different religions, denominations, sects, and tribes arrive at different definitions, most tend to move toward similar paths. At some point, he argues, a researcher needs to allow participants the freedom to self-identify rather than
weighing them down with the responsibility of both understanding and adhering to a scholarly
definition. This study errs on that side of definitions; however, what follows is an attempt to
arrive at some level of cohesion.

In this discussion of the term church, or of the term Christian, or of any related terms, the
definitions will follow Berger’s (2004) description of catholic, which “does not refer to the
Roman Catholic Church, but is simply the Greek synonym for ‘universal’” (p. 131). Addressing
the meaning of universality as it relates to the catholic church, Berger (2004) notes that
“membership in the Church must not be restricted on the basis of any social or biological
category” (p. 139). The intent of this study is not to define or categorize, but to look at
preferences of university students who identify themselves along these lines. Therefore, when it
uses terms such as the “church,” “Christian,” or of any label, they are intended to be inclusive of
any group or individual who identifies themselves as such. The following paragraphs consider
definitions of technology, and then of music as these terms relate to this study.

Equally important for this study are terms such as technology and music. First,
technology is addressed. Historically, our cultural definitions of technology were based on
objects engineered and manufactured by human hands in order to make life better for whatever
human population was involved (Carey, 1989; Schultze, 2003). However, as Park and Burgess
(1967) observed, technological advances that make life better for the majority inevitably make
life worse for some minority population. Additionally, for Park and Burgess, related definitions
of technology are power-laden, benefiting some and simultaneously disadvantaging others. For
this reason, it becomes difficult to arrive at a solid definition of technology, but other reasons are
also evident.
Kvavik (2005) notes the difficulty in defining technology is due to rapid changes in so many related areas, which Landzelius (2006) describes as hardware, software, and wetware. Landzelius points to the physical piece of equipment as hardware, the programming of the equipment as software, and the knowledge to use the equipment as wetware. Kvavik describes how a combination of the three requires constant upgrades in all three areas. Dede (2005) argues that technologies are “emerging rather than mature” (p. 15.19), making firm definitions even more difficult. Recognizing the legitimacy of these arguments, for the purposes of this project the term technology will primarily focus on the use of digitally projected images and/or message content on the walls of a church during worship services.

Having addressed working definitions for the terms Christian, church, and technology, the following paragraphs consider perspectives on the terms traditional music, contemporary music, and blended music. McIntosh (2002) notes two different philosophies in most modern church services, one favors traditional music, and the other favors contemporary music. The easiest definition to address is blended music, which, according to McIntosh, “is the combination of two or more differing philosophies of ministry” (p. 219). Due in part to tension between congregants who prefer one style over the other, blended music attempts to satisfy both styles. Traditional music, for McIntosh, is usually an “organ and piano with hymns led by a song leader” (p. 219). The stated purpose of the lyrics tends toward instruction and the reinforcing of creeds.

According to Chidester (2005), contemporary music is “unified less by musical style, rhythm, or performance than by the explicitly religious content of the lyrics” (p. 31). Song selection is typically built around easily learned camp-fire style songs and commonly written by or arranged by a member of the worship team. The delivery is often presented as a performance
with the audience participation encouraged (Long, 2001). The lyrics to these “praise songs” are typically projected onto a wall and “accompanied by a small band” (McIntosh, 2002, p. 219). The purpose is toward providing an emotional experience for the participants, rather than a means of instruction.

The previous section at once acknowledges the difficulty in defining these terms while presenting those used in the context of this project. Additionally, the cross-disciplinary nature of combing music, technology, and religious practice is acknowledged in the use of research from various academic fields. The next section continues to draw from scholars of communication, religion, music, and from other disciplines, in order to present an historical perspective underlying the complexities of music and technology usage in Christian worship.

A Brief Historical Perspective

This section demonstrates a history of tension around the incorporation of new styles of music as well as the use of technology. Additionally, it presents the argument that some religious groups have been denied technology rather than consciously rejecting it as a religious decision. Scholars (Chidester, 2005; Herl, 2004; McIntosh, 2002) tend to agree that part of the tension behind the incorporation of contemporary music and presentational technologies in the worship setting has to do with assumptions about congregational participation. While most members lean away from singing, Herl (2004) notes that this trend goes back to the sixteenth century when “congregations sang only reluctantly, if at all” (p. 164). Several scholars (Brooke, 1997; Carey, 1989; Schultze, 2003; Soukup, 2005) build a case that demonstrates a history of Christians viewing technology use as either utopian or dystopian.

Herl (2004) shows that congregational conflict over music styles is nothing new for churches and that methodological choices made in such areas have long-term consequences. The
controversy over the purpose of music in Christian worship has been in play for at least 500 years. Swiss reformers John Calvin and Ulrich Zwingli both took stances that have, for the most part, disappeared, but in some congregations their practices (at least in theory) remain. Zwingli, himself an accomplished musician, argued that music serves no purpose in worship, and since Christ never specifically commanded its use, should never be a part of worship. While he later relaxed this position, he was resisting anything that might take on the appearance or fell of entertainment in the context of worship. Calvin, too, was “fighting entertainment in the church” (Herl, 2004, p. 109) and arrived at the notion that no instruments could be used in the worship service. Just as there is a history of viewing music preferences in terms of morality, the same can be seen in terms of technology use.

Schultze (2003) notes that religious groups often speak of media technologies using similar language as when they speak of heaven and hell. Current cultural rhetoric hails space as being productive only when it is interactive and accommodating to wireless connectivity, PDAs and personal, mobile, handheld devices (Katz, 2004; Perring, et. al., 2005; Rheingold, 2002). In the context of Christianity, Beaudoin (1998) illustrates how virtual space is being transformed into sacred space claiming “the limits of our ministries are the limits of our imaginations” (160). On the other hand, Brooke (1997) described the Internet as “the worst kind of alienation – from reality and from God” (p. 176), and argued that its use for religious purposes led to disappointment and delusion. Both Carey (1989) and Schultze (2003) cite many other examples of technology being viewed as utopian or dystopian.

Fundamentalist Christians seem to be most frequently identified as viewing these issues in bipolar terms (Chidester, 2005; Dorgan, 2005; Moore, 2005; Twenge, 2006). This is important, as Twenge notes that “many of the churches that have grown in membership in the
past few decades are the fundamentalist Christian denominations” (p. 35). Fundamentalists, who avoid technology, are growing in number, but several scholars (Dorgan, 2005; Moore, 2005; Schultze, 2003) identify those groups as being widely misunderstood in a number of ways (Dorgan, 2005). For example, Moore (2005) argues that Christian fundamentalists are arguing against rampant materialism, mistreatment of women and children, and economic injustices among other issues, using both modernity and technology. In other words, while fundamentalists have a reputation of abhoring technology (Chidester, 2005; Moore, 2005), Schultze (2003) argues that it is more accurate to say that they were systematically denied access to technologies by the federal government.

Schultze (2003) describes a systematic silencing of voices occurring with the American Evangelical movement in the early twentieth century. In the 1920s, according to Schultze, the Federal Radio Commission worked to ban access of Christian fringe groups to radio airwaves, and this ban included the fundamentalists. The argument is that some religious groups may be denied access to technology – for whatever reason – rather than choosing not to use technology. In other words, it may be that some congregations who have not embraced the use of technology have done so for political, rather than religious conviction. This historical perspective is helpful when considering scholarship addressing the current cultural practices of utilizing music and technology in Christian worship.

The following paragraphs offer scholarly insight into the current music and technology practices incorporated into Christian worship services. First, the current situation and related challenges are described, paying particular attention to technology. Next, the cultural response to the challenges is presented, focusing more on music styles. Finally, the concern over the cultural response is discussed, in terms of both music and technology.
The Current Landscape and Associated Challenges

As noted in the background section, Christian churches are increasingly using projected images and contemporary or blended music in their services. Schultze (2004) observes that this tremendous change crosses denominational strains noting that “a large industry promotes the use of electronic and now digital projection technologies in worship” (p. 13) and warns that the costs are enormous and ongoing. Carson (2005) describes the former pastor of mega-church enamored with technology whose budget came close to eight-million dollars per year. Both Schulze and Carson note that many churches experience great pressure to conform to these new styles of worship, and both express concern.

According to Shultze (2004), some congregations experience a sort of snowball effect: as they spend, they justify, and as they continue to justify, they continue to spend. Once they have made their decision to spend money, they often learn that it takes a lot more money to do what they wanted to do in the first place. They may spend tens of thousands on a projection system, but then realize that for six months out of the year the sun is too bright to project text in the sanctuary. They may purchase all new computers, software, etc., but then realize the only person who really knows how to use everything is no longer interested in their church. The excitement over something new turns to disappointment and frustration. Twenge (2006) notes that technology “may make life easier” but that it does not “lead to happiness” (p. 136), while Schor (1998) observes that emerging technologies “promise freedom but often feel enslaving” (p. 102). The congregations run the risk of expending far more resources – human and financial – than they anticipated. Clearly, this presents a challenge for church leaders.

Two opposing sets of voices have emerged to deal with this challenge. Long (2001) names the two camps the Hippolytus Force and the Willow Creek Force. According to Long, the
Hippolytus Force, named for the third century Roman theologian Bishop Hippolytus, adheres to a more traditional style of worship that embraces hymnals, worship books, and standard liturgies. The Willow Creek Force, named for Willow Creek Community Church, a mega-church located in a Chicago suburb, adopts a fast-paced formula that incorporates flashy visuals through digital projection and offers attempts at more contemporary styles of music. Branson (2007) argues that the music is anything but contemporary, comparing it to the soft rock that emerged in the 1970s.

Long (2001) is leery of this approach, believing it to be inspired more by the television format than by biblical content. In Long’s view, the contemporary worship service is closer to a low-budget attempt at a 1960s variety show approach. At its best, he compares these services to Saturday Night Live with a format that includes some talk, some skits, and a bit of music thrown in the mix. Long describes the underlying structure as based not on any biblical pattern, but on a prime time model he describes as “see you next week, same time, same station” (p. 4). Dawn (1995) argues that congregations have adopted many cultural practices without considering how they might affect communal systems in the church, calling this trend is a form of idolatry.

Murphy (2006) states that the use of “PowerPoint has become a dominant force in worshipping communities across the theological and liturgical spectrum” (p. 10). Her concern is that while congregations are “smitten” (p. 10) with such technologies, there are rarely critical discussions about how they “shape congregational identity” (p. 10). Along the lines of Carey (1989) and Schultze (2003), Murphy maintains that church leaders mistakenly view such technologies as value-neutral, and that they spend more time worrying about technology failure and about the delivery than about the content. She notes that church leaders are increasingly more knowledgeable about technology than they are about liturgy. Murphy’s greatest concern about such practice lies in the area of sensory overload, arguing that when the brain is required to
watch and listen at the same time, it always stops listening. However, Murphy is one of very few voices expressing such concerns, and such voices are given little space or relegated to minor publications.

The previous section considers challenges in the current climate of Christian worship services as they relate to music and technology, as well as the ways in which some churches have responded to such challenges. Additionally, the preceding section addresses the growing concern over that response. Next, the focus turns to cyber-religion and new religious movements, illustrating how these areas are the main interest of scholars researching subjects related to this study. Then the theoretical perspective for this study, uses and gratifications, is discussed, including a history, and explanation, and why the model works as an effective framework for this research project. Later, the focus is on youth culture, noting agreement among scholars across several disciplines and recognizing some of the disagreement, paying particular attention to assumptions that may be responsible for disagreement. Finally, this chapter presents an emerging argument to explain the lack of research into the question of university preferences toward the utilization of music and technology in Christian worship.

*New Religious Movements and Cyber-Religion*

Current scholarship in religious communication and related studies do not address the university student preferences toward the use of music and technology in the context of Christian worship. As noted in the background section, this issue is widely discussed in professional and popular literature, but has yet to be broadly engaged by academicians. There are intermittent studies as they relate to music and technology in the church; however, such studies lack a focus on preferences of university students as they relate to the utilization of music and technology in Christian worship. Current scholarship focuses mostly on new religious movements, cults, and
online religious activity. This section notes such recent studies and ends by noting the growing call for research into the area of music and technology as they relate to youth preferences.

Studies focusing on university students preferences toward the use of technology and music in Christian worship are missing from scholarship. While a few current studies look at the use of music and technology in the church building, such research does not address this issue. For example, Perman (2006) looks at how technology has become a primary consideration in the design and construction of church buildings. Sciacca (2007) gauges subsonic frequencies produced by a pipe organ through a high-definition speaker system. Perhaps the most helpful study comes from Royle and Shellhammer (2007).

Royle and Shellhammer (2007) compared questionnaires sent via mail with those conducted over the Internet, and with a combination of both methods. They found that congregations which are large and/or more recently formed tend toward using online surveys. Additionally, they show that those responding through web-based surveys tend to be more critical of a traditional style of worship. Perhaps more importantly, they show that surveys conducted solely via Internet questionnaires are likely to exaggerate preferences for more innovative practices. Royle and Shellhammer mainly show argue that a bias exists when collecting data solely from the Internet. While this research is both helpful and interesting, it does not address preferences of university students.

Current scholarship is geared toward rising religious movements and cyber-religion or other online religious expression. In the area of religious communication, many scholars (e.g., Campbell, 2005; Dawson, 2004; Lewis, 2003; Lucas, 2004) are researching the rise of new religious movements (NRMs). McDannell (1998) offers insight into material artifacts of Christianity, such as cultural icons and symbols co-opted by various Christian groups,
appropriated for different purposes, and used to express different meanings. Her work focuses on historic movements as well as contemporary trends. Perhaps the most widely discussed NRM is the one commonly referred to as the emerging church, or the emerging movement – a grassroots movement especially attractive to some college aged students (Anderson, 2006; Carson, 2005; Gibbs & Bolger, 2005). As previously discussed in the background section, this movement is also the topic of many non-academic, popular, and professional writers.

Much of the scholarship addressing religion and technology focuses around the online expression of religion. Much of this research is rooted in Haraway’s (1991) notion of the cyborg, “a hybrid of machine and organism, a creature of social reality as well as a creature of fiction” (p. 149), and how such a concept relates to the manifestation of religious expression in an online environment. The idea is basically that there is such a blurred overlapping of technology with our daily lives that it has, at least on some level, become part of who we are. O’Leary (2005) recognizes that “we are all, in one way or another, becoming cyborgs” he also admits that he is “skeptical about whether this will ultimately prove an improvement in and beyond the human condition” (p. 38). Citing his previous work (O’Leary, 1996; O’Leary & Brasher, 1996;) where he claims that computer-mediated communication yields cultural effects comparable to Guttenberg’s printing press, he describes his current state as being “considerably less optimistic” (p. 38) about the cultural effects in the areas of religion and humanity. He is particularly concerned about the sort of technological determinism that pushes groups to “either get on board or be left behind” (p. 39). As noted in the background section, this idea is increasingly expressed by some pastors and congregations today.

Other scholars consider various aspects of religion performed in an online environment, focusing on the rationale and meaning of such practices. Højsgaard (2005) investigates whether

It is evident that a tremendous void exists in the research of this area of cultural production. There is a growing call for scholarship that addresses numerous issues involving the utilization and discourse of music and technology in the context of Christian worship. Arguing that the area of Christian music is immensely understudied, Blumhofer (2004) notes that the subject polarizes virtually all types of congregations. He calls on scholars to consider the cultural implications of current trends in worship practice. Other scholars (e.g., Howard, 1992; Howard & Streck, 1999; Linton, 2000; Tsitsos, 2000) agree that the area is understudied and argue that the implications of current practices extend beyond the walls of the church. Howard and Streck (1999) illustrate how the understudied area of Christian music is a microcosm of divisions in American evangelicalism. Agreeing that the area is understudied, Tsitsos (2000) formally calls for scholarly exploration in the realm of Christian music. Campbell (2005) is clear that much more research is needed to understand the affects of technology on religious communities. To be sure, scholars are extending a call for research into this area.

While there is an academic interest in researching religion, the focus tends to be toward new religious movements or toward online religious expression rather than specific studies regarding the preferences of university students toward the use of music and technology in worship settings. Increasingly, scholars are calling for research with a focus on current practices
of utilizing various forms of music and technology in religious services. Such research builds on the existing body of literature produced by scholars of religion and culture. The next section reviews the body of work from several prominent scholars who have helped to define terms, present an historical framework of this issue, and offer perspectives into the current of music and technology in worship settings.

Uses and Gratifications

Using Bluffton University as the research site, this project incorporates surveys to explore university student preferences toward the use of music and technology in the context of Christian worship. This section details the theoretical perspective implemented in this research project. First, the historical development of the perspective is briefly discussed. Next, the theory is explained, and then the focus turns toward the wide acceptance and recent incorporation of the perspective. Finally, this section illustrates why uses and gratifications is an appropriate and effective perspective when considering the preferences of university students toward music and technology in the context of Christian worship services.

Historical Development

Research utilizing the uses and gratifications approach began in the 1970s as a response to a then accepted view that media happened to people, known as the hypodermic needle or the magic bullet notion. This view believed that media creators had the power to manipulate audiences regardless of audience intellect, experience, or opinion. The audience was believed to be both heterogeneous and passive. Rather than viewing participants as passive slates for media outlets, scholars and researchers began to view consumers of media as active participants who are interested and aware of their individual needs and choices (Rubin, 2002; Ruggiero, 2000). This emerging trend spawned the uses and gratifications theoretical perspective.
Rubin (2002) argued that uses and gratifications is more interested in what people do with media and why as opposed to what media consumption does to people. Katz, Blumler, and Gurevitch (1974) stated that uses and gratifications attempts to account for how “individuals use communications … to satisfy their needs and to achieve their goals” (p. 21). Rayburn (1996) described uses and gratifications as a model to account for media consumption on an individual basis and as an intentional act of the audience meant to accomplish specific needs. Uses and gratifications allows researchers to discover “why, how, and for what reasons people choose to seek out and use media” (Rayburn, 1996, p. 158). Most apropos to this study, the approach investigates why “people become involved in one particular type of mediated communication or another, and what gratifications” (Ruggiero, 2000, p. 29) are received from their selections. Katz, et al. (1974), Rayburn (1996), Ruggerio (2000), and Rubin (2002), understand the audience to be purposeful and aware regarding their media consumption. The implementation of the uses and gratifications theoretical perspective allows researchers to determine the gratifications sought as well as the gratifications obtained from media consumption (Rayburn, 1996) and simultaneously considers the associated effects on individuals as well as on the associated culture (Palmgreen, 1985). Lin (1999) notes the importance of “acknowledging that media users control their own decisions” as being key to this theory (p. 200).

Uses and gratifications “seeks to explain: 1) the psychological needs that help shape 2) why people use the media and that motivate people to 3) engage in media use behaviors to 4) derive gratifications to 5) fulfill those intrinsic needs, within the confines of a particular socio-cultural environment” (Lin, 1999, p. 200). Additionally, Lin notes that the perspective also
acknowledges that varying individual psychological dimensions result in different choices, and that like exposure does not translate to like responses.

Consistent over decades of scholarly development of this perspective is the notion that the audience is self aware of motivations and satisfactions regarding media consumption. All of these scholars point to media consumption as an intentional act performed for a specific purpose. While the language is different, each acknowledges that various gratifications are obtained by the use of media and that individual audience members are fully aware of their actions and fully capable of self reporting their preferences and articulating their needs.

Acceptance within the Discipline

McQuail (2000) notes a “revival” (p. 442) of interest in uses and gratifications theory, and that is particularly true in the discipline of communication studies. Lin (1999) maintains that uses and gratifications is “one of a precious few theories that the communication discipline can truly call its own” (p. 200). McCombs (2004) agrees, and cites agenda setting theory as another, noting the connections between the two. Bryant & Zillmann (1994) also note that uses and gratifications theory is foundational to other theoretical frameworks linked with communication research. Rogers (1994) also ties these approaches together, noting that the “stream of communication research” (p. 243) began decades earlier.

Lin (1999) calls uses and gratifications an “axiomatic theory” (p. 200) due to such widely accepted use across a broad range of research interests. Armfield and Holbert (2003) used the theory to investigate whether higher levels of religiosity translated to higher levels of Internet usage. Richardson (2003) adopted this approach when examining the motivations for visiting an agnostic website. Ferguson, et al. (2007) incorporated the framework to explore how and why college students use MP3 players and radio. Hall (2007) used the perspective in conjunction with
an online survey of young adults to determine another person’s perspective of the media consumer, based on the media consumer’s preferences.

As Lin (1999) noted uses and gratifications is appropriate for a number of studies and an effective framework to understand audience preferences. Each of the preceding studies incorporated a variety of methodologies based on uses and gratifications to arrive at a better understanding of motivations behind media choices. The following paragraphs address how the theory addresses university preferences toward the use of music and technology in the context of Christian worship.

*Appropriate and Effective for this Study*

As a theoretical perspective, the uses and gratifications approach is “readily applicable to a wide range of situations” (Lin, 1999, p. 200). This perspective operates under the assumptions that there are multiple ways to utilize media, and consumers decide how they use media forms and how it will affect them. Lin (1999) notes that media usage, such as technology and music use in worship services, is highly social, calling it “a type of self-actualization” (p. 201). Lin details five self-actualization needs related to uses and gratification research as cognitive needs, affective needs, integrative needs, contact needs, and escape needs. Each of these needs, in some way, corresponds with and even echoes McQuail, Blumler, and Brown’s (1972) descriptions.

As Lin’s (1999) observations relate to this study, cognitive needs have to do with understanding a message, such as sermon outlines and passages being projected. The affective needs, which “strengthen aesthetic or emotional experience” (Lin, p. 201), connect with not only projected images, but also with the use of contemporary music. It is possible that the integrative needs of individuals or of an entire congregation, expressed by Lin as “confidence, credibility or stability” (p. 201) might also be accounted for through the use of media in a worship setting.
Additionally, both contact and escape needs should be expressed through the incorporation of music and technology in the context of Christian worship.

Both Ruggiero (2000) and Rubin (2002) demonstrate that uses and gratifications can be effective in researching the appropriation and effects of emerging technologies. Palmgreen, Wenner, and Rosengren (1985) argue that uses and gratifications can effectively draw conclusions about the social and psychological origins of media gratifications, audience activity, gratifications sought and obtained, as well as both media consumption and effects. Uses and gratifications is an obvious theoretical choice when asking about preferences of media use.

This study asks whether university students have any preference toward the use of music and technology in their Christian worship services. Uses and gratifications assumes an active audience, meaning that university students make choices about attending worship services. The theory assumes that individual audience members are self aware and able to self report their preferences. The theory has proven effective in studies of university students and their preferences toward music and technology (Drumheller, 2005; Ferguson, et al, 2007; Hall, 2007) as well as in studies of religiosity (Armfield & Holbert, 2003; Richardson, 2003). It is clear that the uses and gratifications perspective is an appropriate choice for considering university student preferences toward the use of music and technology in the context of Christian worship.

Youth Culture

It is appropriate to look at existing research on youth culture since young adults are the target audience of this research. This section of the literature review primarily examines studies of youth culture. General agreements are presented, as well as some disagreements concerning preferences and practices of young people relating to music, religion, and technology. Next, this section considers how recommendations from Strauss and Howe (2007) for dealing with
millennials in higher education might apply to the question of youth church attendance. Next, assumptions connected to these options are addressed, as related to the church application. Finally, a review of literature concerning millennials reveals a possible alternative explanation as to why this generation is not attending church, and provides some support for the notion that youth do care about religion. The general findings are presented first.

Moller (1968) demonstrates that youth play a prominent role in every major development in history. To be sure, there is great interest in this demographic, and the allure has produced numerous terms and descriptions from various scholars. As a result, some confusion exists in terms of nomenclature and span of years regarding this group. Although she studies youth culture, Twenge (2006) argues that definitions and predictions about them are premature. Various scholars incorporate their own terms and categories for the purposes of their own research. For example, Rainer (1997) refers to them as bridgers, defining their age range as being “born between 1977 and 1994” (p. 1), while McIntosh (2002), using the same term, describes them as the grandchildren of the baby boomers, consisting of those born between 1984 and 2002. Although Twenge (2006) argues that “those born after 1980 do not yet have a coherent generational identity or name” (p. 6), perhaps the most common term is millennials – those born between 1982 and 2002 (Howe & Strauss, 2000, p. 11). As for some of the other categories, Reeves and Oh (2007b) offer a comparison chart (p. 3) to help sort out the various names, age ranges, and associated scholars. Despite minor discrepancies in taxonomy, there is a consensus among scholars (e.g. Duck & Koeske, 2005; Howe & Strauss, 2000; Rainer, 1997; Strauss & Howe, 2006, 2007) that millennials are a generation at ease with technology. The notion that they care deeply about their music is almost as clear (e.g. McIntosh, 2002; Rainer, 1997). The
questions apropos to this research are whether having their style of music included and/or technology as a focal point of their worship experience is important to them.

One of the overarching themes with young people is that they have a mastery of technology, and that they are continually connected to their music (Coomes, 2004; Frand, 2000; Havelka, 2003; Howe & Strauss, 2000; Kvavik, 2005; Raines, 2003). This generation has quickly surpassed their parents in usage of existing and emerging technologies and is the first generation in history to do so (Howe & Strauss, 2000, p. 23). As a group, these young people wield “unprecedented levels of skill with information technology” (Kvavik, 2005, p. 7.1) and “intuitively use a variety of IT devices and navigate the Internet” (Oblinger & Oblinger, 2005, p. 2.5). Duck and Koeske (2005) assert that young people are drawn to technology because they view it as something concrete – as something that can be measured and mastered. Other scholars (Campbell, 2001; Raines, 2003) demonstrate that music presents a constant backdrop of almost all of the technology this generation consumes, such as video games and websites, as well as television, movies, and music downloads. Such research indicates that young people care about music and technology and that there is much overlapping of the two in terms of consumption and usage.

According to some scholars (Nelson & Bald, 2001; Wang, 2005) it is difficult to separate music and technology practices in youth culture. Nelson and Bald (2001) argue that “music, technology, and politics are intertwined” (p. 88). Wang (2005) also connects music and technology in his research of cell phone use. Arguing that media is increasingly “the primary conveyor of common culture,” Cimino and Lattin, (1998) agree with the blur between music and technology, adding that such resources will become the “main bearer of spiritual and religious insight” (p. 38). Music and technology are connected in youth culture and they care about both,
but that does not necessarily translate into demands for their incorporation into worship services. Since no one is offering research into this area of Christian worship, it is helpful to look at Strauss and Howe (2007), who offer guidance to those in higher education.

Reeves and Oh (2007) argue that “the most frequently cited sources for issues related to generational differences are the works of Neil Howe and William Strauss” (p. 4), but these popular researchers are not without their critics. For example, some scholars (Blohowiak, 2002; Twenge, 2006) do not share the optimism that Howe & Strauss have for this generation. Others (Reeves & Oh, 2007; Simões & Gouveia, 2008) take issue with their methodology, claiming, for example, that their studies focus only on college students as opposed to all millennials across the full range of educational and socioeconomic ranges. One of the strongest critiques comes from O’Neill (2000), who states that research from Howe and Strauss “mixes statistics from responsible data-collectors such as the Institute for Social Research with results from scientifically unrepresentative surveys … and from postings on their websites” (p. 1). Despite such concerns, Strauss and Howe do enjoy the respect of their fellow scholars undergoing similar exploratory research. Therefore, it does seem appropriate to consider their recommendations.

Strauss and Howe (2007) offer three options to deal with youth as they enter the university classroom. First, ignore them – or at least, their needs – and cling to old ways. Second, scramble to adapt to their evolving needs, including ever-changing technologies. Third, lead the way to something new. When applying these options to the church, this means that one choice is to ignore youth, while another is to offer new technologies as quickly as possible, and a third is to lead (possibly the youth) in something new and meaningful.

Ignoring youth – the first option – does not seem to be an effective way to proceed, as these young people are future and even current leaders (Schultze, 2004). Coomes and DeBard
(2004) note that “cutting-edge Millennials will have established themselves in entry-level administrative and faculty positions by 2012” (p.12), but these young people already hold decision-making roles in churches today (Schultze, 2004) and they do express their feelings of being ignored. For example, Sandfort & Haworth (2005) found that millennials were “disappointed that their churches and synagogues had not attempted to relate to and draw in young adults like themselves” (p. 7). Four primary themes were cited to explain why this generation is leaving the church: “the irrelevance of established practice to their lives, a continual feeling of being ignored by the church, the evolution of science, and the seeming rejection of organized religion among their baby boomer parents” (Sandfort & Haworth, 2005, p. 7). In other words, the irrelevance of the established ways and a sense of being ignored were found to be two major themes offered by youth to explain their own lack of attendance in church.

The second option of frantically trying to keep up with changing technology is not working. While this approach is widely adopted in churches, the action is based on untested assumptions (Long, 2001; Murphy, 2006; Schultze, 2004). At the core of this assumption is the notion that because music and technology are important aspects of youth culture, that youth will be attracted to worship services incorporated both components (Dawn, 1995; Long, 2001; Murphy, 2006). This assumption will be dealt with from the perspectives of several academic disciplines, but first, the third option from Strauss and Howe (2007).

The third option offered by Strauss and Howe (2007) is to lead the youth to something new. There is at least some speculation that a focus on technology is misguided. Reeves & Oh (2007b) acknowledge studies of generational differences, however, like Postman (2003), they conclude that such differences “are not salient enough to warrant the specification of different instructional designs or the use of different learning technologies” (p. 21). If we follow Strauss
and Howe, the third option of offering a new way may have little to do with technology or music. McIntosh (2002) cites “storytelling, apologetics, and interactive learning” as keys to connecting with this generation (p. 232). He is clear that a focus on interactive learning does not necessarily mean a focus on technology. This is important, he argues, because he sees this generation as pushing “churches toward creative uses of technology and raise some significant questions about postmodernism along the way” (p. 232). In other words, rather than focusing on having technology, focus on the needs and questions prominent in youth culture. McIntosh presents some promise of that third option.

The previous section addresses three options for dealing with youth culture in the context of church, adapted from recommendations by Strauss and Howe (2007) in the context of higher education. The first option is to ignore them, and evidence is presented (Sandfort & Haworth, 2005) that such an option is ineffective. The second option is to expend whatever resources are available to try to keep up with the constantly changing world of technology. The third option is to lead in a new direction. This next section focuses on two key assumptions about youth culture – assumptions that are increasingly challenged, especially by scholars looking at higher education (Kvavik, 2005; Postman, 2003; Reeves & Oh, 2007b; Szeto, 2005) and by scholars looking at the church (Barna, 2001; McIntosh, 2002; Murphy, 2006; Rainer, 1997; Seasoltz, 2005). One assumption is that youth require to be instructed via the use of technology. The Second assumption is that youth do not care about religion.

The first assumption is that youth demand certain styles of music and technology in the context of Christian worship. A closely related assumption is that similar technologies are demanded in the university classroom. Conventional wisdom assumes that since research indicates youth culture embraces both music and technology, that this demographic must desire
to have these methodologies as part of their worship experience. This untested assumption is the basis for decisions to alter practice. The following paragraphs provide evidence that this assumption is flawed, that such changes are ineffective, and that youth do not care about the changes in practice.

Assumption: Youth Demand Technology and Contemporary Music in Worship

An assumption exists among church leaders and congregants that youth culture demands instruction through the use of various technologies, but it has yet to be empirically tested in the context of university student preferences toward the use of music and technology in Christian worship. In a related field, academicians are considering this assumption as it relates to the university classroom. Szeto (2005) notes, “since the advent of the PC, a widely held assumption has been that younger generations would no longer use traditional media; however, the so-called ‘generational effect’ has not been quantified” (p. 1). Lee (2000) agrees that there is little support for such claims that youth will abandon traditional technologies or that they will necessarily demand that others accommodate their technological practices. Kvavik (2005) argues that the “assumption of the technology literate undergraduate student population needs to be demonstrated with quantitative data,” calling the bulk of current studies “intuitive” (p. 7.1). This assumption is present in scholarship connected to religious practice as well as classrooms settings.

Citing a “a steadily rising market for religion-infused music – not so much for ‘Christian’ or ‘Gospel’ genres … but for new Gen-X rock groups … that have been introducing Christian themes to mainstream youth audiences” (Strauss & Howe, 2006, p. 189), Strauss and Howe demonstrate how important music is to this generation, and other scholars agree (Kvavik, 2005; Raines, 2003). Indeed, it seems logical that music and technology would be an important
consideration for them as they choose whether to attend church. However, research indicates that preferences and practices in one area of life do not necessitate the same preferences and practices in all aspects of life. While a number of studies focus on youth in the workforce (Cameron, Bright & Caza, 2004; Lam, 2005; Poole, 2004) there is some speculation that generational differences in the workplace do not necessitate changes in technological methodologies in related environments (Reeves & Oh, 2007b).

Addressing the call to add technology to classrooms, Postman (2003) asserts that “there does not exist any compelling evidence that PCs or any other manifestation of computer technology can do for children what good, well-paid, unburdened teachers can do. Nor is there any evidence whatsoever that children in wired classrooms do any better than children who aren’t” (p. 193). Kvavik’s (2005) findings revealed that despite all of the efforts of the past decade or so, “25.6 percent of the students preferred limited or no use of technology in the classroom” (p. 7.8). Concerning such efforts and assumptions, there is an overlap between the areas of the higher education classroom and the Christian worship service.

While Rainer (1997) acknowledges that “many churches have reached bridgers initially with user-friendly methodologies such as rock music and games” (p. 183), he is quick to note that these same young people will leave suddenly if they believe there is a lack of substance underlying such tactics. Rainer argues that if youth “want a show, better venues and more professional performances are available … 24 hours a day” (p. 31). Barna (2001) arrives at the same conclusion, noting that music and technology “may attract them once or twice, but those elements will not keep them coming back” (p. 38). Rather, Barna argues that this demographic will only return when they perceive “sufficient substance, quality, hope, and genuine mutual concern and acceptance” (p. 38). McIntosh (2002) echoes both Rainer and Barna, arguing that
this demographic mostly seeks a deep sense of community rather than entertainment from church.

Seasoltz (2005) demonstrates that churches are so deeply entrenched in this entertainment mode of thinking that it has become their main focus in architecture. Beginning with Luther, Calvin, Zwingli, and other reformers, Seasoltz traces church architecture into this new millennium, noting that the trend over the past few decades has been to build churches around an “entertainment model” (p. 285) which emphasizes music and technology. Long (2001) notes the same captivation with entertainment and indicates that it is misguided, at best. He places the focus of the entertainment not on the youth, but on the older generations. McIntosh (2002) agrees, claiming it is more accurate to say that the Baby Boomers are the ones who like the contemporary style of music rather than the younger generations. Beaudoin (1998) also argues that this comes from an older generation, stating that music as well as most other parts of the contemporary service “have been inspired by boomer pop culture, from popular music to television shows” (p. 160). In other words, it is more important to older generations to display technology and contemporary styles of music in worship than it is to younger generations.

Assumption: Youth Do Not Care About Religion

To be sure, there is a gap in the area of academic inquiry examining university student preferences toward the use of music and technology in Christian worship. One possible way to explain the void in this area has to do with existing research indicating that church has little appeal in youth culture. Initially, research seemed to indicate that it is characteristic for this generation to have little interest in religion. Strauss and Howe (2006) claim that while boomers were interested in religion, “millennial teens show the opposite bent” (p. 93). Duck and Koeske (2005) assert that this demographic prefer easily measurable subjects to anything more
ambiguous. For example, they offer that young people prefer technology to religion since a mastery of technology is more easily measured than a mastery of religion.

Researchers (Beaudoin, 1998; Campbell, 2005; Chickering, et al, 2005; McDannell, 1998; McIntosh, 2002; Twenge, 2006) note that part of the erroneous assumption that young people are less concerned about religion comes from the way others researchers frame the topic. Beaudoin (1998) notes that older generations “cannot think about what it means to be religious without conjuring up an image of a particular institution” (p. 51). Chickering, et al (2005) note that while institutional religion is “no longer the center of Americans’ religious and spiritual life” (p. 72) interest in individual religiosity remains high. McDannell (1998) argues that young Christians “want to see, hear, and touch God” and that it is insufficient for them to simply “go to church, lead a religious life, and hope for an eventual place in heaven” (p. 1). Chidester (2005) agrees, noting that young people demand authenticity in their religion.

Twenge (2006) notes the declining attendance, but indicates that the apparent lack of interest has less to do with religion per se, than it does with social groups as institutions, noting little interest and any sort of group cohesion. According to her extensive research, while church attendance has declined, so have memberships in nearly all community groups and voting polls in the same time periods. Her concern is that young people are “growing ever more toward disconnection and away from close communities” (p. 36) as they become more focused on their own specific interests and beliefs. Cimino & Latin (1998) also found this trend, noting “the continuing separation of spirituality and formal religious institutions” as well as “a ‘pick and choose’ approach to faith” (p. 38). This presents evidence that young people have a different way of expressing their faith, or maybe a different way of adhering to their convictions, but does not show that students are not interested in religion.
On this point, there is a great deal of agreement among scholars. Campbell (2005) argues that while Christians today still hold tightly to their beliefs, and still feel connected to others who share them, they are less inclined to identify with an institution that states the same beliefs. In fact, she argues, many people intentionally avoid these institutional ties and see no downsides to doing so. Along the same lines, Carson (2005) describes a growing number of people who have become discontent with the institution of contemporary Christianity, “but have not lost interest in Christianity” (p. 15). Sandfort and Haworth (2005) share similar findings, stating that “organized religion is giving way to movements in personal spirituality” and that young people “accept it regardless of their affiliation with the traditions of old” (p. 6). “Most participants” in the Sandfort and Haworth study “wholeheartedly believed that their generation valued organized religion less than previous generations” (p. 6).

According to the Pew Forum on Religion & Public Life (2008), this generation is more open, more tolerant and less dogmatic than previous generations. The Pew Forum reports that seventy percent of Americans affiliated with a religious tradition believe that “many religions can lead to eternal life … including more than half of members of evangelical Protestant churches (57%)” (p. 3). Bruce (2001) notes that “personal preference has long dominated the mainstream churches and … is now becoming common even in churches that fifty years ago prided themselves on requiring subscription to an orthodoxy” (p. 97). While Bruce focuses on beliefs, Campbell (2001) focuses on their delivery system of choice, the Internet, stating that “what emerges is a world of information and entertainment in which spirituality is just as likely to be channeled through music or art of film as through primary religious institutions, personnel, and ‘experts’” (p. 63).
Research from the Pew Internet & American Life Project (2000) reveals that “21% of Internet users, between 19 million and 20 million people, have looked for religious or spiritual information online” (p. 6). This means that “on a typical day online, more than 2 million people are getting such material” (p. 4). An online environment, argues O’Leary (2004), creates “active participants … linked not by geography but by technology and interests alone” (p. 40). Lövheim (2004) claims that such online access can “empower individuals to handle the greater insecurity and ambiguity of life” (p. 62) experienced in youth culture today. In other words, there is evidence that this demographic is interested in religion. At the same point, there is evidence that younger people are not committed to the same sort of organized religion embraced by older generations. Other scholars (Cimino & Latin, 1998; McDannel, 1998) show evidence that young people are practicing and enacting their faith outside of the context of a church setting, including their homes, their clothing choices, and in their selections of workplace and of educational institutions.

The previous section focuses on research surrounding youth culture. Wide-ranging agreement and some disagreement among scholars is addressed, as well as assumptions as they relate to university students preferences toward Christian worship practice. Additionally, an emerging argument explaining the limited study of this topic is discussed. The following section focuses on conducted in the context of higher education classrooms focusing on the use of technology. Three lessons are presented and each is directly related to the question of university preferences in worship settings.

*Higher Education*

This section looks primarily at research conducted in the context of the university classroom. It is appropriate to investigate this literature since there is a wide body of research
available focusing on youth and technology. Additionally, church leaders experience tensions similar to those described by scholars looking at higher education. While scholarly studies considering the use of music and technology in worship settings are virtually nonexistent, by contrast, similar studies in the context of the university classroom are plentiful. Such studies are apropos to compare, since technology developers tend to use similar rhetoric in dealing with institutions of higher education as with congregations (Schultze, 2004). There are three general lessons to be learned from considering studies conducted in the context of higher education. First, that studies must occur in order to test assumptions and that studying the use of various technologies results in an increased understanding of those technologies, as well as better methods and practices utilizing those technologies. Second, that frantically changing the content delivery method has the possibility of altering the content. Third, that the assumption of youth demands may be minimal, and so there may be no need to change delivery methods, and that doing say may yield minimal improvement.

The first lesson learned is that studies must be conducted; in other words, assumptions must be tested before being accepted, and through research the use of technologies becomes more effective. It is clear that scholars are investigating assumptions and methodologies regarding the use of technology in higher education. Whereas many congregations uncritically embrace technologies, the pedagogical understanding of academicians leads them to continually consider, assess, and evaluate the outcomes of introducing such techniques. Studies examining the utilization of technology in the context of higher education demonstrate that such critical inquiry yields better use of presentational and content delivery technologies. Both the technologies themselves, as well as the methods to incorporate those technologies, are improved by such critical examination.
For example, after conducting empirical research, Blake and Scanlon (2007) offer best practices for effective simulations and science experiments using distance learning. Panda and Mishra (2007) argue that attitudes toward technology are perhaps the key to an effective transition from traditional learning to web-enhanced learning. Annetta, et al. (2008) examine the benefits and limitations of the use of game theory as a pedagogical tool. Clarebout and Elen (2008) research the effects of instructor intervention concerning online tool usage in open learning environments. Landzelius (2006) notes discrepancies in educational access, citing a trio of needs: hardware, software, and wetware. Each of these studies produces findings aimed at better understanding the use of technology for the purposes of finding the most effective means and applications of its utilization. Whether arguing for or against the use of technology in university classrooms, scholars are engaging empirical research as a means to make their argument.

Second, scholars examining presentational and content delivery technologies provide evidence that the delivery system alters, at least to some degree, the content presented. Perhaps most apropos to this study, Tufte (2006) argues that PowerPoint has the tendency to diminish content, and then to force the leftovers into fragments that can only be interpreted in a linear model. Murphy (2006) contends that students are unable to equally take in both audio and visual messages simultaneously, so content must be altered accordingly. Spoken content, according to Murphy, must then be built around the projected content as students tend to stop listening when visual messages are presented. Therefore, these scholars argue, delivery methods affect content.

Third, researchers (Kvavik, 2005; Postman, 2003; Reeves & Oh, 2007b) indicate university students gain little from technology use in the classroom, and that their demands for classroom use of technology is lower than some might assume. Such research acknowledges
existing assumptions regarding youth culture’s demands for the incorporation of technology, but
demonstrates that these assumptions are unsubstantiated by empirical data (Kvavik, 2005).
Reeves and Oh (2007b) argue that while organizational scholars (Cameron, Bright & Caza,
2004; Lam, 2005; Poole, 2004) point to generational differences in the workplace, such
differences are insufficient to demand the incorporation of technology practices or to replace
existing, tried and tested pedagogical methodologies. Kvavik (2005) argues that an increase in
technology for students in higher education “has little impact on their learning” (p. 7.9).
Research demonstrates that more than one-fourth of university students “preferred limited or no
use of technology in the classroom” (Kvavik, 2005, p. 7.8). In other words, the idea that this
demographic displays generational differences in the workplace does not translate into forcing
changes in higher education classrooms. Research indicates that students do not necessarily
expect the incorporation of technology in the classroom, and that doing so has a minor impact on
learning.

While this topic is of great interest to a number of populations, there remains an absence
of scholarly research in the area of technology and music in the context of worship – particularly
compared to its usage in the realm of higher education. The core argument presented here is that
existing assumptions need to be tested, that delivery modes may affect the content delivered, and
that this young people may not be demanding such technologies. Scholars in higher education
(e.g., Blake & Scanlon, 2007; Panda & Mishra, 2007) illustrate that thinking critically about the
use of technologies makes technology use more effective. Scholars from various disciplines
(Blumhofer, 2004; Campbell, 2005; Howard & Streck, 1999; Linton, 2000; Tsitsos, 2000;) are
calling for more research into the areas of church-related music and technology use. Scholars
have yet to directly address issues surrounding music and technology preferences of young people in the context of Christian worship.

Areas of Explorations

Given the void in this area of research, this work began to consider the possible relationship between university student worship preferences toward music and technology and their choices regarding attendance. Specifically, three areas of exploration were the foci of this study. First, was there a relationship between technology use and current preferences? Second, was there a relationship between past experiences and current preferences? Third, was there a relationship between levels of religiosity and current preferences? While this was an exploratory study, given my understanding of this research site and of these participants it is clear that a custom tool was the best option to gather greatest amount of quality data.

As with any research, this exploratory project was entered into with certain expectations. For example, it followed that those who were accustomed to only one specific style of worship were likely to have a current preference toward that same style. Therefore, a participant who grew up in a worship context where video projection was used on a regular basis was expected to have a current preference toward the same. On the other hand, a student having no experience with video projection in worship was expected to have less of an interest in video projection in worship. Similar relationships with song style and musical accompaniment were anticipated. A student who grew up in a worship context with a cappella traditional songs was expected to associate that same song style and musical accompaniment with current preferences toward worship. Along the same lines, a student who grew up in an organization incorporating the use of more contemporary styles of worship and musical accompaniment including drums and electric guitars was likely to hold a current appreciation toward the same sort of music in worship.
It was expected that those who participate in Bluffton University religious events will have a higher preference toward the use of contemporary music and video projection in worship, as those tactics were widely used on the Bluffton University campus in religious event programming. It was anticipated that student use of technology would be high but that it would not necessarily include religious content. Another expectation was that higher levels of technology use would be connected to a greater desire for technology in worship.

There was little expectation for finding a relationship between levels of involvement with worship and preferences toward specific styles in worship services as the presumption was that students favor the style with which they are most experienced. Further, levels of on-campus religious activity were not assumed to have a significant effect on preferences toward music or technology use. Neither the age nor the gender of a respondent was presumed to affect current preferences toward music or technology use in worship.
CHAPTER III: METHODOLOGY

This chapter addresses the logic of the research design, including the choice of research subjects and approach to gathering information about their preferences. From there, it explains the development and design of the research instrument and the means by which the research findings were collected and analyzed. Next, the instrument is detailed, including its design and its scales. Finally, this chapter presents the factor loadings, Chi-squares, alphas, and additional statistical findings from this study.

The most effective means of investigating the power of technology enhanced worship to attract and retain young congregants was to explore the value that men and women between the ages of 18 and 22 placed on these changes to traditional worship approaches. Arguably then, the most effective way to explore the efficacy of these changes to worship was to interact directly with young people, and certainly the most relevant subgroup within the demographic stratum was young people with religious commitments. While there might have been a number of means of reaching such research subjects, an efficient and effective means to identify a sizeable sample of them was to survey university students who identified themselves as religious – the students enrolled at a private Christian college.

Given the gaps identified in the literature concerning young people’s preferences among the different approaches to worship, this study began the systematic scholarly exploration of university student preferences toward the use of music and technology in the context of Christian worship services. Within its larger questions the study explored relationships between university student worship preferences and the frequency of their technology use; focusing specifically on their use of technology for the purpose of reinforcing their faith; possible relationships between
their preferences for worship and their religiosity, the frequency of their participation in worship, and what other activities they participated in which might have been considered religious. In addition, the study looked at possible relationships between their worship preferences and their previous experiences with music and technology in worship.

Participants

Population and Research Site

The full-time, traditional residential students enrolled at Bluffton University (affiliated with the Mennonite Church, USA), in Bluffton, Ohio, offered exactly the kind of population the study needed. According to data available from the university’s Admissions Office via the application process, students represent many denominations with the top three being: Evangelical, Catholic, and Mennonite. Most of Bluffton’s students are 18 to 22 years old. They generally come from within 100 miles of campus and 92.63% of the full-time, traditional enrollment lives on campus. The Bluffton student to faculty ratio is 13 to 1, and its first to second year retention rate is 76%. Based on data available from the Institutional Research Office at Bluffton University gathered for the cohort entering in Fall 2008, the sex distribution was 48% male and 52% female. Using categories provided by Bluffton University, the ethnic breakdown consisted of international students (1.10%), African-American (4.04%), Hispanic (1.47%), White (90.44%), and “Unknown” (2.94%). The average GPA of this cohort was 3.28 and the average ACT score was 22. Sixteen percent of the students ranked in the top 10% of their high school class, and 40% ranked in the top 25%.

Respondents to Survey

The total sample was 123 participants. Participants ranged in age from 18-22, with a mean age of 20.00 (SD = 1.21). Of the participants, 43 were male (35.00%) and 80 were female.
(65.00%). Bluffton researchers advised against collecting data in the areas of denomination and ethnicity since institutional data was already available.

**Procedures**

**Data Collection**

On Monday, February 9, 2009, one 28-item questionnaire was placed in the campus mailbox of each undergraduate student enrolled fulltime in the *regular program* at Bluffton University during the spring semester of 2009 ($N = 768$). Only fulltime students enrolled in the *regular program* at Bluffton receive an on-campus mailbox. After receiving approval for the project through both Bluffton University’s Institutional Review Board (IRB) and Bowling Green State University’s Human Subject Review Board, the surveys were printed by the Assistant Bookstore Manager and Printer. The surveys were delivered directly to the Marbeck Center Secretary who is responsible for the distribution of all surveys via student campus mailboxes and who can do so only after receiving approval from Bluffton’s IRB. Each questionnaire was accompanied by a letter explaining the nature of the research project and the letter asked that the surveys be returned to the researcher’s mailbox by Thursday, February 12, 2009.

During January, 2009, an announcement was made at a faculty meeting regarding this project and asking that the faculty encourage students to respond. Additionally, a request was made to the Assistant Campus Pastor asking that announcements be included in upcoming Chapel services to make students aware that the survey would appear in their mailboxes. While 79 were returned by that date, an additional 27 were returned over the following two weeks. On Thursday, February 26, surveys were made available to two classes (a total of 46 students) and students who had not completed the surveys were invited to complete one, resulting in an additional 17 surveys returned. The total number of completed surveys was 123.
Response

The target number for participants for this study was forty percent. Based on projections from the admissions department at Bluffton University, there would be approximately 800 fulltime traditional undergraduate students enrolled in the regular program during spring semester, meaning 320 respondents were targeted. The actual number of students enrolled was 768, meaning approximately 307 respondents were desired; however, only 123 responded to the survey, meaning about 16% of the total population.

There were two reasons for the low response rate. The first reason for the low response rate was that the researcher did not communicate widely enough about the survey with potential participants and gatekeepers. While attempts were made, ultimately the announcements did not go out. For example, the researcher asked to have announcements made before Chapel services, but this did not happen. Additionally, the person overseeing B.A.S.I.C. (an acronym for Brothers And Sisters In Christ) groups was asked to encourage announcements to be made in those small group meetings, but this also did not happen. The second reason for the low response, which is tied to the first, is that a similar survey came out just before this one resulting in confusion among students. The other survey, which focused on Chapel services and B.A.S.I.C. group activities, was sent out two weeks before this survey. Many students who saw the instrument connected with this study assumed they had already responded to this survey when they had not.

Instrument

The intent of the instrument was to measure three areas as each relates to university student preferences toward the use of music and technology in Christian worship. The three areas were: first, was there a relationship between technology use and current preferences? Second,
was there a relationship between past worship experiences and current preferences? Third, was there a relationship between the on-campus religious activities of students and their current preferences? Thus an instrument was developed; the following section outlines the rationale for rejection of established measures, details the instrument, identifies the three statistically relevant scales to emerge from the instrument, and discusses the difficulties in developing the instrument.

Uses and gratifications research has a long tradition of utilizing both quantitative and qualitative methodologies, specifically in the area of new technologies (Ruggiero, 2000), but its roots were mostly qualitative (Rayburn, 1996). This type of research allowed for the development of multidimensional scales and statistical analyses of variables, including multiple regression and canonical correlation (Palmgreen, Wenner, & Rosengren, 1985). Uses and gratifications research quickly grew to embrace quantitative methodologies as well as incorporating mixed methods (Ruggiero, 2000).

While existing standardized scales informed the development of this research they ultimately did not meet the specific needs of this study. For example, both the Personal Involvement Inventory (Rubin, 2004, p. 286) and the Student Motivation Scale (Beatty, 2004, p. 343) appear at first to be good candidates for this type of study. Both scales were discussed with fellow researchers at Bluffton University and it was determined that the categories would likely be interpreted as too varied and somewhat confusing by this population.

Additionally, the Television Viewing Motives Scale (Perse, 2004) was attractive, but not a close fit for this study. While this scale shows promise for a study considering student involvement in B.A.S.I.C. groups on Bluffton’s campus, it would not produce the sort of data helpful to this study. For example, each of the questions in this scale might be altered to focus on student reasons for being involved in this voluntary activity, including each of Greenberg’s
(1974) categories of relaxation, companionship, habit, pass time, entertainment, social interaction, information, arousal, and escape. The scale could be even be combined with the Behavior Alteration Techniques Scale (Kearney, 2004), which focuses on the relationship between a student and a teacher, or in the case of religiosity it could potentially be altered to accommodate a religious leader.

In the end, it was determined that the local nature of this research dictated the development of a custom instrument specifically designed to address this population. The aforementioned scales informed the development of this research tool. The development of such instruments usually results in some concern over validity and generalizing to other populations. Therefore, it is important to note this instrument was first pre-tested with positive results. Additionally, it is of equal importance to recognize that this was exploratory research designed to get the greatest level of response from this particular population.

Based on the guidance from the Bluffton researchers outlined above and the uses and gratifications reliance on survey research design, a two-page survey was designed that could be completed in roughly 10 minutes. The result was a 28-item questionnaire (see Appendix A), which generally used questions that could be answered using Likert-type responses. The questionnaire addressed the respondent’s technology use as well as worship preferences past and present, and also included variables arriving at religious activity on the Bluffton University campus.

Instrument Design

The order of the instrument was designed to allow respondents to be eased in to the potentially sensitive subject matter. Therefore, the survey began with questions regarding their general use of technology and media on the first page. Next, the instrument asked for
respondents’ past experiences with worship settings and followed with questions regarding their current preferences toward the use of music and technology in Christian worship services. Only then did the survey inquire about religious activity on campus. The second page followed the logic of the first page, and asked more detailed questions about their reasons for using technology and media, and then tackled the question of whether their preferences affected their choices to attend services. Next, the instrument asked about their on-campus religious activities. The final questions addressed gender and age.

The first page used a Likert-type scale to gauge general technology use and consisted of three items, numbered 1-3. The purpose of these questions was to establish the usage of personal media devices, websites, and other forms of visual media. Since the instrument worked to identify the level of usage, the response options began with “every day” and ended with “never.”

Similar scales were used for items numbered 4-6, which dealt with the respondents’ previous worship experiences, as well as items 7-9, which asked for current preferences regarding the use of music and technology in worship services. Items 4-6 focused on the use of digital projection, song style, and musical accompaniment in their worship services experienced before coming to Bluffton University. Items 7-9 explored their current preferences toward the same. Items 4 and 7 both asked about digital projection and therefore offered the same response options: “in every service,” “once monthly,” and “never,” and allowed for options in between. Items 5 and 8 both dealt with song style and therefore offered the same response options: “traditional hymns only,” “equal mix of both,” and “praise & worship only,” and allowed for options in between each response. Similarly, items 6 and 9, which explored musical accompaniment, offered identical response options: “drums & electric guitars,” “only piano and/or organ,” and “no use of instruments,” and allowed for responses between each category.
The last set of questions on the first page introduced items addressing religious activity. Items 10 and 11 asked about their frequency of prayer and of reading the Christian Bible. The response options offered were “at least daily,” “monthly,” and “never,” and allowed for options between each category. Item 12 addressed the frequency of attending worship services and offered responses of “at least weekly,” “monthly,” and “never,” and also allowed for options between each category.

The second page of the instrument utilized a Likert-type scale offering identical options for items 13 through 26: “Strongly Agree,” “Agree,” “Neutral,” “Disagree,” and “Strongly Disagree.” The rationale for using this scale was the wording of the items which suggested more concrete responses. In other words, while the first page inquired about subjects with the possibility of wide-ranging responses, these items were likely to illicit more standard responses. The wording of these items did not demand the flexibility of the various options utilized on the first page of items.

Items 13-15 inquired again about respondents’ use of media and technology. These items explored whether technology and media use corresponded with what participants deemed Christian content. Next, issues of digital projection, song style, and musical accompaniment methods were again addressed. Items 16-18 went beyond participants’ past experiences explored in items 4-6, as well as the current preferences considered in items 7-9, to investigate whether such preferences led to choices regarding attendance. In other words, while participants may have expressed a preference toward the use of certain methods in worship such preferences may not necessarily have translated into a choice to attend certain worship services. Again, this set of items was worded in a manner that allowed for the more direct response options of “Strongly Agree,” “Agree,” “Neutral,” “Disagree,” and “Strongly Disagree.”
Next, items 19 and 20 asked respondents about their involvement in two major voluntary religious offerings at Bluffton University: the weekly Chapel services, and the B.A.S.I.C. groups. The Chapel services lasted about 50 minutes, and incorporated a variety of music styles and practices of various Christian denominations. The B.A.S.I.C. groups varied widely, from in-depth studies of Christian texts to pizza parties, from gatherings of less than an hour to all-night events, and from a few to dozens of participants. Addressing these items allowed a gauge for religious activity on campus.

Item 21 asked respondents to consider their level of activity in their worship setting. This item allowed respondents’ thinking to flow from attendance back into areas of worship style preferences. Items 22-26 focused on whether their faith influenced choices beyond worship attendance, particularly in the areas of technology and media use, as well as other life decisions. Again, the wording of these items allowed for the more direct response options of “strongly agree,” “agree,” “neutral,” “disagree,” and “strongly disagree.” Finally, items 27 and 28 addressed the demographic characteristics of age and gender.

On-Campus Religious Activities Scale

This scale of seven items measured the on-campus religious activities of students. The questions fell into two sections with each question utilizing a five-point Likert-type scale. The first set of inquiries included: “I pray” with the response options “daily”, “between”, “weekly”, “between”, “never”; “I read a version of the Christian Bible …” with the response options “daily”, “between”, “weekly”, “between”, “never”; “I attend worship services” with the response options “at least weekly”, “between”, “monthly”, “between”, “never”. The second set of inquiries included: “My faith is important when I choose what to read (books, magazines, etc)” with the response options “strongly agree”, “agree”, “neutral”, “disagree”, “strongly disagree”;
“My faith is important when I choose what to watch (movies, television, etc)” with the response options “strongly agree”, “agree”, “neutral”, “disagree”, “strongly disagree”; “My faith is important when I choose what kind of music to listen to” with the response options “strongly agree”, “agree”, “neutral”, “disagree”, “strongly disagree”; “My faith is important when I choose what websites to visit” with the response options “strongly agree”, “agree”, “neutral”, “disagree”, “strongly disagree”. The Cronbach alpha for religious activities of students was .90 ($M = 3.47; SD = .96$)

**Uses Scale**

This scale consisted of three items measuring the student use of technology for accessing religious content. The questions were measured by a five-point Likert-type scale and included: “I often use an Ipod (or similar media device) to listen to Christian music or programming” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”; “I often visit websites associated with Christianity” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”; “I often watch Christian television or movies” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”. The Cronbach alpha for the uses scale was .72 ($M = 2.89; SD = .97$)

**Gratifications Scale**

This scale was comprised of five items measuring student gratifications obtained. Each question utilized a five-point Likert-type scale and included: “Using an Ipod (or similar media device) for Christian programming is entertaining” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”; “I gain information about my faith when visiting websites related to Christianity” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”; “Watching Christian movies or television makes me feel more
connected to my faith” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”; “I find my attendance at Bluffton University Chapel to be highly beneficial” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”; “My involvement in a Bluffton University B.A.S.I.C. group provides a sense of belonging” with the response options “strongly agree, agree, neutral, disagree, strongly disagree”. The Cronbach alpha for gratifications scale was .79 ($M = 2.81; SD = .94$)

**Difficulties**

There were two main areas of difficulty encountered in this study. First, there were interpersonal difficulties such as access to students and the resistance to an outside researcher. Conscious and subconscious resistance to individuals who are not members of an ingroup is common in research and can lead to challenges in gaining access to subjects, information, and openness (Geertz, 1973). The resistance led to the second challenge, the development of an instrument with non-relevant questions. Based on previous experiences, those holding the power to grant access to members of this community (gatekeepers) were concerned about how the community and its members might be represented. Therefore, instead of using proven statistical measures of religiousness, and media uses and gratifications, a self-generated instrument was utilized for this study. Additionally, some on-campus groups wanted this instrument to address questions outside the scope of this project. Thus, the final version of the instrument contained several questions which were ultimately irrelevant to this study and statistically insignificant; however, the instrument still managed to yield some important and statistically significant findings.

While the instrument initially incorporated 11 items measuring student media use, the completion of exploratory factor analysis found only three items to be statistically relevant.
Principal component analysis revealed the three items measuring media uses to be below the recommended .70 Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy, but above the .50 unacceptable threshold. Furthermore, each item loaded at .65 or higher, an important element for sound factor structure (Mickey, Dunn, & Clark, 2004). See Table 1 for a detailed description of the factor structure of student media uses.

Table 1

<table>
<thead>
<tr>
<th>Student Media Uses and Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>I often visit websites associated with Christianity</td>
</tr>
<tr>
<td>I often watch Christian television or movies</td>
</tr>
<tr>
<td>I often use an Ipod (or similar media device) to listen to Christian music or programming</td>
</tr>
</tbody>
</table>

Note: \( \chi^2 = 80.17, df = 3, p < .0001. \) Kaiser-Meyer-Olkin = .66.

Concerning the measurement of media gratifications, the original scale included 10 items. Completion of exploratory factor analysis revealed five items surfaced as valid measures of a Bluffton student’s media gratifications. Principal component analysis revealed the five items measuring media gratifications to be above the recommended .70 Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy. Furthermore, each item loaded at .65 or higher, an important element for sound factor structure (Mickey, Dunn, & Clark, 2004). See Table 2 for a detailed description of the factor structure of student media gratifications.
Table 2

**Student Media Gratifications and Factor Loadings**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using an Ipod (or similar media device) for Christian programming is entertaining</td>
<td>.78</td>
</tr>
<tr>
<td>My involvement in a Bluffton University B.A.S.I.C. group provides a sense of belonging</td>
<td>.77</td>
</tr>
<tr>
<td>I find my attendance at Bluffton University Chapel to be highly beneficial</td>
<td>.77</td>
</tr>
<tr>
<td>Watching Christian movies or television makes me feel more connected to my faith</td>
<td>.71</td>
</tr>
<tr>
<td>I gain information about my faith when visiting websites related to Christianity</td>
<td>.69</td>
</tr>
</tbody>
</table>

*Note: χ² = 182.39, df = 10, p < .0001. Kaiser-Meyer-Olkin = .77.*

The original scale for on-campus religious activities of students included seven items. The completion of exploratory factor analysis showed all seven items were valid measures of a Bluffton student’s media uses. Principal component analysis revealed the seven items measuring on-campus religious activities of students to be above the recommended .70 Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy. Furthermore, each item loaded at .65 or higher, an important element for sound factor structure (Mickey, Dunn, & Clark, 2004). See Table 3 for a detailed description of the factor structure of on-campus religious activities of students.
Table 3

On-campus Religious Activities of Students and Factor Loadings

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My faith is important when I choose what kind of music to listen to</td>
<td>.88</td>
</tr>
<tr>
<td>My faith is important when I choose what to watch (movies, television, etc)</td>
<td>.86</td>
</tr>
<tr>
<td>My faith is important when I choose what to read (books, magazines, etc)</td>
<td>.83</td>
</tr>
<tr>
<td>My faith is important when I choose what websites to visit</td>
<td>.78</td>
</tr>
<tr>
<td>I read a version of the Christian Bible …</td>
<td>.78</td>
</tr>
<tr>
<td>I attend worship services …</td>
<td>.70</td>
</tr>
<tr>
<td>I pray …</td>
<td>.68</td>
</tr>
</tbody>
</table>

Note: $\chi^2 = 512.10, df = 21, p < .0001.$
Kaiser-Meyer-Olkin = .88.

Summary

This chapter explained the methodology of this research project. The rationale for the design and the site were discussed, including both the typical Bluffton student as well as those who took part in the study were described. Additionally, the procedures pertaining to data collection were detailed, including the instrument design and its associated scales. Tables displayed statistically valid data which will be further addressed in the next chapter.
CHAPTER IV:
RESULTS & INTERPRETATION

This research project investigated the worship preferences of professing Christian students at Bluffton University paying particular attention to the utilization of music and technology. The participants of this study were traditional-aged undergraduate students enrolled full-time in Bluffton University’s regular program. This project incorporated survey questionnaires based on a uses and gratifications perspective. The core expectation was that students would have a high preference for the use of music and technology in Christian worship services, and that a student’s higher level of technology use would be positively correlated to a higher preference for its use in the context of Christian worship. An additional expectation was that students’ past experiences with technology and music would be similar to their current preferences toward the same. Finally, it was expected that students who had high levels of on-campus religious activity would hold a strong preference toward the use of contemporary music and digital technology use in worship services. The three main inquiries of the study were expressed in the following research questions, which are detailed in the following pages:

RQ1: Is there a relationship between student use of technology and their current preferences toward the use of technology in the context of Christian worship?

RQ2: Is there a relationship between past experiences with technology use in the context of Christian worship and current preferences toward the use of technology in Christian worship?

RQ3: Is there a relationship between student levels of on-campus religious activities and their current preferences toward the inclusion of technology in their Christian worship practices?
On Monday, February 9, 2009, one 28-item questionnaire was placed in the campus mailbox of each undergraduate student enrolled fulltime in the regular program at Bluffton University during the spring semester of 2009 \((N = 768)\). Each questionnaire was accompanied by a letter explaining the nature of the research project and the letter asked the surveys be returned to the researcher’s mailbox by Thursday, February 12, 2009. Requests were made for announcements to take place at a faculty meeting, in upcoming Chapel services, and in B.A.S.I.C. groups to make students aware that the survey would appear in their mailboxes. The total sample was 123 participants, meaning 16%, which is a moderately respectable percentage of the total population surveyed. From the perspective of uses and gratifications research, this sort of exploratory study had never been undertaken in the context of Mennonite educational setting. The survey findings bear out some of expectations and do not bear out others. The findings suggest strong connections that are worthy of further exploration and future research.

This chapter is organized into four sections. First, details regarding the statistical analysis are presented, including an overview of all variables that were considered for analysis purposes. Each question utilized the same statistical tests and measures, therefore, appropriate statistical tests are described along with the measures used to assess the significance of the findings. All descriptive statistics and correlations are displayed in Table 4.

Second, the chapter is organized by the research questions in the order they were presented in the literature review. In each case, the question is outlined and results are presented. The third section addresses the interpretation of the results and is ordered around the significance of the findings, addressing first those findings with the highest level of statistical power. The fourth section addresses additional results gained from this study.
Statistical Analysis

The first step in the statistical analysis of this study was to examine frequencies, meaning in this case, the number of times a survey response was given by the participants. After running frequencies, the initial data suggested there might be differences in how male and female students responded to the instrument. The data revealed additional findings not directly related to the research questions; however, the research questions will be addressed first.

The research questions were analyzed using the Pearson product-moment correlation coefficient. Pearson’s R is used to ascertain the relationship between two or more interval or ratio variables with values ranging from -1 to 1 (Wrench, Thomas-Maddox, Richmond, & McCroskey, 2008).

In this study all variables were considered interval for analysis purposes. Table 4 presents the descriptive statistics and correlations for all variables tested.

Table 4
Means, Standard Deviations, and Correlations for All Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Gratifications/Current Preferences</td>
<td>2.81</td>
<td>.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Religious Activities</td>
<td>3.47</td>
<td>.96</td>
<td>.73*</td>
<td></td>
</tr>
<tr>
<td>(3) Student Media Uses</td>
<td>2.89</td>
<td>.97</td>
<td>.64*</td>
<td>.69*</td>
</tr>
</tbody>
</table>

Note: p < .01.

---

1 Pearson’s product-moment correlation is widely used as a measure of strength of linear dependence between two variables. The correlation coefficient can take values from -1 to +1. A value of +1 means the variables are perfectly related in the same direction, a value of -1 means the variables are perfectly related in the opposite direction, and a value of 0 means the variables are not related to each other. There is a strong correlation if the correlation is greater than 0.8 and a weak correlation if the correlation is less than 0.6 (Wrench, et al., 2008).
Results

Research Question 1

RQ1: Is there a relationship between student use of technology use and their current preferences toward the use of technology in the context of Christian worship?

Research question 1 asked if there was a relationship between technology use and current preferences. Pearson correlation $r(123) = .64$, $p < .01$, revealed a student’s technology use was positively correlated with their current preference toward the use of technology in the context of Christian worship. This is a moderately strong correlation.

Research Question 2

RQ2: Is there a relationship between past experiences with technology use in the context of Christian worship and current preferences toward the use of technology in Christian worship?

Research question 2 asked if there was a relationship between past experiences with technology use in the context of Christian worship and current preferences toward the use of technology in Christian worship. However, exploratory factor analysis of the original survey instrument did not allow this question to be addressed with any statistical power. Exploratory factor analysis is a statistical method that examines how many concepts a set of scale items is measuring. This method groups the individual scale items into logical and coherent sets of concepts called factors. This tool helps researchers determine the statistical ability of an instrument to reliably and validly address the variables it attempts to address (Kim & Mueller, 1978).

While current preferences are still measured in a modified form from the original instrument, see Table 2 in the Methodology Chapter, questions pertaining to past experiences
were found statistically invalid. Therefore, this instrument did not allow for analysis of a possible relationship between past and current preferences as only a few of the items for current preferences remain in the survey instrument.

Research Question 3

RQ₃: Is there a relationship between student levels of on-campus religious activities and their current preferences toward the inclusion of technology in their Christian worship practices?

Research question 3 asked if there was a relationship between a student’s on-campus religious activities and current preferences. Pearson correlation $r(123) = .73, p < .01$, revealed a student’s level of on-campus religious activities was positively correlated with their current preferences toward the inclusion of technology in their Christian worship practices. This is a relatively strong correlation.

Interpretation

This section orders the questions based on their statistical merit rather than on their order in the instrument. The first question addressed is RQ₃; then RQ₁ is addressed, followed by RQ₂.

Research Question 3

RQ₃: Is there a relationship between student levels of on-campus religious activities and their current preferences toward the inclusion of technology in their Christian worship practices?

Research question 3 revealed a relatively strong positive correlation between a student’s level of on-campus religious activities and their current preferences toward the inclusion of technology in their Christian worship practices. This means students who have higher levels of involvement in on-campus religious activities are more inclined to prefer the use of digital
projection and more contemporary music styles than those who are less involved with on-campus religious activities.

At Bluffton University, the most popular on-campus religious activities are the weekly Chapel services and the B.A.S.I.C. group gatherings. Participation in either activity is completely voluntary, and students are encouraged to participate in the organization of the events. Chapel services are typically more structured than B.A.S.I.C. groups, which range from in-depth studies of doctrine to informal pizza parties. Both activities include popular music, clips from network television, and movie viewing. It is common for discussions regarding the principles portrayed in films to take place after the viewing.

Since the on-campus activities include the use of projection and music, it makes sense that students who regularly attend appreciate what is offered. However, this could also mean if alternative worship and music styles were offered more students might attend. This is valuable information that could inform a future study and will be further addressed in the next chapter.

Research Question 1

RQ1: Is there a relationship between student use of technology and their current preferences toward the use of technology in the context of Christian worship?

Analysis of survey data collected revealed a moderately strong positive correlation between a student’s technology use and their current preference toward the use of technology in the context of Christian worship. This means students with high levels of technology in other parts of their lives have a higher preference toward the use of technology in their worship. In other words, students who are accustomed to performing other functions of their lives with technology, tend to have a higher expectation to see the same during their worship service.
This information could have several different interpretations. First, it could mean that students with higher levels of technology use in their daily lives see no separation between worship and their daily living. If they do expect differences, the expectations may have nothing to do with technology use. It is possible that technology, as Nelson and Bald (2001) assert, is so intertwined in the lives of young people that its influence creeps into every part of their lives. If this interpretation is correct, the sort of research addressed in this study becomes crucial in that scholars need to develop a greater understanding of what impact this blurring of media use means for young people and for the messages developed for and by them.

A second interpretation follows Cimino and Lattin, (1998) notion that music and technology could soon become the most important vehicles to deliver religious content. In other words, it may be that these young people view such resources not as equal to other parts of their lives, but as elevated carries of content surpassing face-to-face interpersonal communication. In line with Carey (1989) and Schultze (2003), this demographic could understand technology to be beyond a value-neutral delivery mechanism. If this is the case, this sort of study is important in that it causes scholars to focus on what many marketing professionals and public relations practitioners have researched for decades – how to best develop the message for the specific audience in the most appropriate delivery mechanism available.

A third possible interpretation could be that students have simply become accustomed to the use of technology in their religious worship services but do not necessarily want it. In other words, this could be the first time that they have encountered this type of question and have yet to consider any implications of the question. If this is the case, future studies could incorporate the use of focus groups and interviews in order to delve deeper into the student rationale for the use of technology in worship services.
Research Question 2

RQ2: Is there a relationship between past experiences with technology use in the context of Christian worship and current preferences toward the use of technology in Christian worship?

Exploratory factor analysis helps to determine the statistical ability of an instrument to reliably and validly address the research questions it attempts to address. Exploratory factor analysis of the survey instrument did not allow this question to be addressed statistically. In other words, this instrument could not adequately address whether there is any statistically significant relationship between past preferences and current preferences toward the use of music and technology since the questions pertaining to past experiences were unable to be validated using statistical measures. However, there is no evidence that the relationship does not exist or that such a relationship may not be statistically significant. Rather, this particular instrument was unable to carry statistical relevance, as revealed through exploratory factor analysis.

While it is not possible to analyze the relationship between past and current preferences using this survey instrument, future research is planned using a different instrument. The experience gained from this exploratory research will be useful in the development of a new instrument geared toward further study. Additionally, it may be valuable to explore this research question using qualitative methods, such as interviews and focus groups.

It is still important to address this question since it lies at the heart of the debate initiating this type of research. For example, if young people have a preference toward whatever they have experienced in the past, then there is really no rationale for spending financial and human resources toward the development on new delivery mechanisms. Some scholars (Long, 2001;
Twenge, 2006) have suggested this might be the case, but the question has yet to be fully explored.

On the other hand, if student preferences are based on criteria having little or nothing to do with their past worship experiences, then it is equally important to understand those criteria. If student interest in worship services hinges on a specific delivery mechanism rather than content, or if students are seeking a specific type of experience, it is important to be able to understand and articulate those gratifications sought.

In other words, there are not only theoretical implications driving the need to address this question, but also practical needs at stake. Since the growth and expenditures of mega-churches across the nation are apparent, it is easy to assume that cause is associated with the utilization of technology and the incorporation of more contemporary music styles in the worship services. However, we have no empirical evidence to support that assumption. Further, Twenge (2006) and Burek (2010) offer examples of growth in congregations who refuse to incorporate such methods and yet are still geared toward that same demographic. Therefore, while this particular instrument could not adequately address this question, the question remains important and further research (as noted in the following chapter) is planned with tested instruments.

Additional Findings

Looking at initial data suggested there might be differences in how male and female students responded to this instrument. Four unexpected results were found in the data gathered on sex. First, this study found Bluffton University women to be more involved with on-campus religious activities than men. Second, that women use media devices to consume religious programming more than men at Bluffton. Third, women at Bluffton obtain higher levels of gratifications from their media devices than men. Fourth, women at Bluffton obtain higher levels
of gratifications from their on-campus religious activities than men. Each of these findings reveals additional implications, based on the scales used as described in the previous chapter.

Based on the data being analyzed, independent t-tests were utilized to determine any relationship between the variables. A t-test statistically examines the extent to which the mean of two groups statistically differs on a given dependent variable (Hays, 1973). In other words, a t-test measures one nominal variable, such as male or female, with the interval or ratio variable scores of categories, such as on-campus religious activities (Wrench, Thomas-Maddox, Richmond, & McCroskey, 2008).

It is important to note that in each case Levene’s test for equality of variances was not significant, meaning that the equality of variances can be assumed. This is important since heterogeneous variances violate a key assumption of the t-test (Field, 2009). The Levene’s test examines homogeneity of variance, assuming that the variances across samples are equal. When the test is statistically significant the assumption is not met (Wrench, et al, 2008).

**Involvement with On-Campus Religious Activity**

An independent t-test was conducted to determine if a student’s on-campus religious activity differed based on gender (male and female). The Levene’s test for equality of variances was not significant ($F = 1.43, p = ns$), so equality of variances can be assumed: $t(121) = 2.64, p > .01$. This means women ($M = 3.64; SD = .89$) are more involved with on-campus religious activities than men ($M = 3.14; SD = 1.02$).

This scale measured the frequency of prayer, reading the Christian Bible, and attending worship services, women who are students at Bluffton University have higher levels of involvement with these practices than do men who are students at Bluffton University. Additionally, this scale measured the impact of faith on choices related to reading books and
magazine, listening to music, watching movies and television, and visiting websites. Therefore, women who are students at Bluffton University are more impacted by their faith in these choices than are men who are students at Bluffton University.

*Use of Technologies to Consume Religious Programming*

An independent *t*-test was conducted to determine if a student’s use of various technologies for the purpose of Christian programming differed based on sex (male and female). The Levene’s test for equality of variances was not significant (*F* = .31, *p* = *ns*), so equality of variances can be assumed: *t*(121) = 3.93, *p* > .0001. This means women (*M* = 3.13; *SD* = .89) use these technologies for religious programming more than men (*M* = 2.45; *SD* = .96).

This scale measured the use of personal media devices to consume Christian programming, the visiting of websites associated with Christianity, and the viewing of Christian television or movies. The results of the data analysis indicate that women who are students at Bluffton use these technologies to consume Christian programming at a higher rate than men who are students at Bluffton.

*Gratifications from Technologies to Consume Religious Programming*

An independent *t*-test was conducted to determine if a student’s gratifications obtained from the use media devices and from their on-campus religious activity differed based on sex (male and female). The Levene’s test for equality of variances was not significant (*F* = 1.96, *p* = *ns*), so equality of variances can be assumed: *t*(121) = 4.79, *p* > .0001. This means women (*M* = 3.09; *SD* = .82) have higher levels of gratifications obtained from the use of media devices and from their on-campus religious activities than men (*M* = 2.30; *SD* = .96).

This scale measured the gratifications obtained from the use of media devices for entertainment, information gaining via online resources, and establishing stronger connections to
their faith. This suggests that women who are students at Bluffton find more entertainment and more information from these devices than do men who are students at Bluffton. Additionally, women establish stronger connections to their faith through the use of these media devices than do men.

*Gratifications from On-Campus Religious Activity*

This scale also measured Chapel attendance and involvement in a Bluffton University B.A.S.I.C. group. Therefore, more women students at Bluffton found their attendance at Chapel to be highly beneficial than did men. Additionally, more women reported their involvement with a Bluffton B.A.S.I.C. group to provide a sense of belonging than men. Women are more engaged in campus resources tailored toward expressions of their faith than men, and women report higher levels of gratifications obtained from their involvement than do men.

*Summary*

This chapter presented the statistical results of this research project. First, all descriptive statistics and correlations were outlined in Table 4. Second, the results were displayed for each research question in the order in which it appeared on the instrument, including the associated alphas and correlations. Third, the interpretation of each research question was presented, ordered by its statistical power. Fourth, additional findings from this research project were presented, as well as the associated interpretations.

The data gathered produced two key findings directly related to the research questions. First, students who are more involved with on-campus religious activities have a stronger preference toward the use of technology and contemporary music in their worship services. Second, students who report a higher level of technology use in other parts of their daily lives have a stronger preference toward the utilization of technology in their worship services.
Four additional findings realized through the collection of demographic data based on gender were also presented. First, Bluffton University women to be more involved with on-campus religious activities than men. This finding also shows female students at Bluffton University pray, read the Christian Bible, and attend worship services more frequently than male students at Bluffton. Second, women use media devices to consume religious programming more than men at Bluffton University. This finding also reveals women, more than men, allow their faith to impact choices regarding media consumption such as music, television, movies, and websites. Third, female students at Bluffton University report stronger connections to their faith through their use of media devices than do male students. Fourth, women at Bluffton University have higher levels of gratifications obtained than do men at Bluffton University.

Additionally, this chapter explained that this instrument could not fully answer research question two: Is there a relationship between past experiences with technology use in the context of Christian worship and current preferences toward the use of technology in Christian worship? Further, it explained why this question is still important and why it will be addressed in future research, which is detailed in the following chapter. The next chapter focuses on the discussion of this project.
CHAPTER V: DISCUSSION & CONCLUSION

This study looked at preferences of Bluffton University students toward the use of music and technology in the context of Christian worship services. A survey instrument was made available to all students enrolled full-time in the regular program at Bluffton University during the spring semester of 2009. Scholars studying communication and religion, religion and cultural trends among university students, music and technology, and additional areas will be interested in the results of the survey which insight into student preferences.

This chapter begins by exploring the major findings of this study. Next, it examines the theoretical extensions of technology in worship settings. It goes further to address the theoretical implications and advances in the uses and gratifications perspective. Next, practical applications for religious leaders are presented, including the current use of technology in worship and a charge to religious leaders. Finally, plans for future research are discussed, including areas for improvement and areas for expansion.

Major Findings

The first major finding of this study suggests students who are more involved with on-campus religious activities are more inclined to prefer both the use of digital projection and more contemporary music styles than students who are less engaged. The second major finding reveals students that with high levels of technology use in other parts of their lives are more likely to desire the use of technology in their worship services. Additionally, findings suggest that women have significantly higher levels of religiousness, which appears to influence their choices of media consumption and worship preferences.
In particular, the study shows female students at Bluffton University pray, read the Christian Bible, and attend worship services more frequently than male students at Bluffton. Additionally, female students at Bluffton report their faith has a higher impact on choices related to the books and magazines they read than do their male counterparts. This trend extends into their consumption of music, television, movies, and websites. Women, more than men, report that they cultivate stronger connections to their faith through their use of media devices. This is in keeping with previous studies, which show that women tend to be more religious than men across various issues and throughout different contexts. For example, religiosity plays a greater role in identity formation for women than for men (Lewin, 1976; Rey, 2004; White, 2004), and religion impacts cultural values and attitudes at greater levels for women than for men (Graybill & Arthur, 1999; Horsfield, 2004).

The findings of this study support existing research indicating religiousness has a greater effect on women than on men. Religion impacts women more than men consistently across denominations, ethnicity, and socioeconomic status (Campbell, 2005; Chidester, 2005). McDannell (1998) found Mormon women to be more religious than Mormon men. Dorgan (2005) found Appalachian women to find more meaning in religious practices than men. Moore (2005) found greater levels of religiosity among fundamentalist women than among fundamentalist men. Additionally, scholars indicate that women are more apt to consider their religious beliefs than men when selecting media, and they are affected in greater ways by that consumption (Bilandzic & Rössler, 2004; Busselle & Crandall, 2002; Eggermont, et al., 2005; Minnebo, 2005).

The study findings also indicate women in this sample are more likely to use media devices to consume religious programming than their male equivalents. Women, more than men,
find more entertainment from their use of media devices and websites. Similarly, women report finding more information when using these resources than men report finding.

Bluffton’s women students obtain greater levels of satisfaction from their on-campus religious activities than male students at Bluffton. Women reported their weekly attendance at Chapel services to be highly beneficial in greater numbers than men reported. Perhaps student use of media has more to do with on-campus religious activity than it does with gratifications obtained. Along those same lines, women as opposed to men who are students at Bluffton, are more inclined to gain a sense of belonging from their weekly involvement in Bluffton’s B.A.S.I.C. gatherings.

Theoretical Extensions of Technology in Worship Settings

The study began in order to address whether congregational expense on technology was an effective means to achieve their goal of attracting and retaining young people. This study extends the use of media for religious purposes by delving into the setting of Christian worship services. Additionally, this study supports findings from existing research regarding religion and media use. Since existing research does not focus specifically on the use of media in the context of worship, but on relationships between religiosity and media use, this study focuses on media use in the framework of worship.

In other words, while previous scholarship addressed topics of religion and media use (Davies, 2007; Hamilton & Rubin, 1992; Parker, Barry, & Smythe, 1955; Wicks, 2006), the topic has yet to be investigated in the context of Christian worship services. Scholars agree that there is much more to be explored in this area (Blumhofer, 2004; Carey, 2002; Howard, 1992; Howard & Streck, 1999; Linton, 2000; Stout and Buddenbaum, 2002; Tsitsos, 2000). This study contributes to that need.
The findings from this study support existing research showing that highly religious groups are more likely to use certain forms of media. However, previous research focuses on reading of newspapers (Armsfield & Holbert, 2003) or television consumption (Abelman, 1987; Korpi & Kim, 1986; Pettersson, 1986) and not on digital projection and music style. Further, existing research tends to view religion as a secondary factor (Buddenbaum & Stout, 1996), whereas this study elevates religious activity to a primary consideration in media uses and gratifications. This is a different form of media, but still supports the needs of the participants and still promotes their cause as do other forms previously studied.

Armsfield and Holbert (2003) found that people who regularly attend church services are more likely to consume media content via newspapers. The same study showed people with higher levels of religiosity are less inclined to utilize online resources. In other words, Armsfield and Holbert’s findings separate church attendance from other measures of religiosity, as well as show a tendency toward homogeneity of use within similar groups. Additionally, their work warrants further studies into areas of religious groups’ utilization of the Internet since their primary focus was newspaper readership.

This study supports the findings of Armsfield and Holbert (2003) in that this also found a tendency toward similar use patterns among those who regularly attend on-campus religious activities, such as Chapel or B.A.S.I.C. groups. Bluffton University students with high levels of on-campus religious activity were more inclined to have stronger preferences toward the use of contemporary music and digital projection in their worship services. Additionally, this study also reveals that students who regularly use technology in other parts of their daily lives have a tendency toward homogeneity in preferences toward the use of technology in worship.
Other studies connect television viewing with religiosity. For example, Korpi and Kim (1986) examined financial contributions from viewers of religious programming. Their findings indicate viewers who support a particular program or ministry are more inclined to accept religious programming as an acceptable alternative to conventional church attendance. However, Pettersson (1986) argues while many find viewing televised worship services to be more convenient than attending church services in person, it is doubtful televised services will replace conventional church attendance. Pettersson shows the gratifications obtained from traditional services are not the same as the gratifications obtained from viewing religious services via television.

This study supports findings from Korpi and Kim (1986) as well as from Pettersson (1986) in that it also reveals that students who attend Bluffton university Chapel services find the attendance to be highly beneficial. Additionally, students who are involved with B.A.S.I.C. groups believe this affords them a sense of belonging. Therefore, this study supports the findings of Korpi and Kim, and of Pettersson regarding the need for involvement and attendance.

Abelman (1987) explored why television viewers are drawn to religious programming. The study showed religious programming does not always meet religious gratifications. Rather, he found some individuals select religious programming as an alternative to traditional secular media when that venue does not meet their non-religious gratifications. For example, some religious television stations carry older secular programming (such as The Andy Griffith Show, Father Knows Best, and The Partridge Family) during prime time that is not always available on other channels. Abelman indicates some viewers are less interested in content that is specifically religious than they are in options that are simply different than what is airing on secular channels.
This study supports Abelman’s (1987) findings that viewers respond to religious programming for multiple reasons. For example, women at Bluffton University more than men, use religious programming for a sense of community. Men at Bluffton University tend to use religious programming for information gathering purposes.

While these studies offer a certain level of competing findings, each shows multiple types of gratifications obtained through a sense of belonging. This study supports such findings. It is important to note that these studies leave a gap in the area of research focused on technology use in Christian worship services. Additionally, it is clear variables and measures of religiosity are consistently viewed as secondary rather than primary factors in these studies.

Buddenbaum and Stout (1996) champion the need for studies in which variables are focused on religiousness. Their work, focused on newspaper readership and television viewing, found people who attend church services are more likely to read newspapers as well as watch television. Much the same as Armsfield and Holbert (2003), Buddenbaum and Stout found homogeneity of media use among similar groups.

This study supports findings of similar patterns of media use within a group with high levels of homogeneity, the students at Bluffton University. Those students with higher levels of on-campus religious activities have similar preferences toward the use of both digital projection and more contemporary music styles. Bluffton University students with similar patterns of technology use are more likely to desire the use of technology in their worship services. Similar preferences and usage patterns are also present when homogeneity is based on gender.

The findings from this study indicate that religious leaders should investigate the preferences of young women regarding technology and music in Christian worship settings. Additionally, leaders should consider whether technology use attains their organizational goals.
Theoretical Extensions of Uses and Gratifications

Incorporating the uses and gratifications model for this study offers tremendous insight into the preferences of Bluffton University students concerning music and technology use in Christian worship settings. This theoretical framework also gives insight into Bluffton student use of media for religious purposes, as well as how student religiosity informs and shapes their choices of media consumption. In addition, this study extends the uses and gratifications theory in two key areas.

First, this project focuses both on a different technology and a different context: digital projection in the setting of Christian worship services. That means this work will be read by populations where uses and gratifications may not have been encountered as a theoretical framework. From a practical standpoint, this sort of exposure will give church leaders a new perspective to address their questions and concerns. For the extension of the theory, this means a new context for a specific form of media: digital projection in the context of the Christian worship service.

Second, this study focuses on an environment with a strong emphasis on homogeneity. This means the theory is used to study individual preferences, but recognizing the importance of a collectivist environment in media consumption choices. For the religious practitioner, this offers a new level of understanding, connecting cultural influence with personal preference.

Different Technology & Different Context

The uses and gratifications perspective is a foundational theory in media studies and has a long history of being tested by scholars. Lin (1999) refers to the perspective as an “axiomatic theory” (p. 200) noting its wide acceptance across a broad range of research interests. The major tenants of this theory focus less on what media does to people than on how and why people use
media. Uses and gratifications attempts to account for how “individuals use communications …
to satisfy their needs and to achieve their goals” (Katz, Blumler, & Gurevitch, 1974, p. 21).

The approach assumes an active audience, and explores issues regarding why an audience
consumes content from a particular form of media (Rubin, 2002; Ruggiero, 2000). An audience
is made up of individuals, each bringing their own sets of preferences, and each seeking to
satisfy their own sets of needs. Lin (1999) notes the perspective acknowledges that varying
individual psychological dimensions result in different choices. According to this theory, media
consumers interact with media content and have agency to determine whether they obtain the
levels of gratifications they seek. In other words, individuals play active roles in their media
choices. Media consumption does not simply happen to people. Uses and gratifications research
begins with the understanding that each viewer, regardless of experience, intellect, or opinion, is
aware of both their needs and their choices. The applications of this theory continue to evolve
(Lin, 1999; McQuail, 2000).

Studies utilizing uses and gratifications continue to evolve from the theory’s early roots
which examined text-based messages, where it is still effective today (Armfield & Holbert,
2003). Additionally, the theory is used to examine the gratifications sought and obtained through
notes resurgence in the perspective among younger researchers. In this most recent decade,
scholars embraced the theory to examine emerging technologies, the use of online resources,
portable digital devices, and other related technology areas (Ferguson, et al, 2007; Hall, 2007;
Richardson, 2003; Rubin, 2002; Ruggiero, 2000). Each of these studies will be addressed later in
this chapter, but it is important to note that none of these have explored the use of technology
resources in the context of a worship service. Since this theory is flexible enough to examine all
types of media interaction (Lin, 1999), this study extends the theory of uses and gratifications by researching a different technology, digital projection, in a new context, Christian worship services. In this way, the study has built on the work of previous uses and gratifications scholars.

Researchers such as Palmgreen, Wenner, and Rayburn (1980), Rosengren (1974), Rubin (2002), McQuail, Blumler, & Brown (1972), and others offer immense contributions in and beyond the area of uses and gratifications research. It should be recognized that uses and gratifications research does not end with their research. The major contribution of this study for uses and gratifications is as an ambassador, or as an advocate. This work takes the theory into populations where it is not being utilized as a theory and to an audience that neither reads nor understands the potential of its use.

Homogeneous Religious Group Choices

Secondly, this study furthers the uses and gratifications theory by researching collective groups, rather than individuals only. As previously stated, one strength of this theoretical perspective is the recognition that an audience is comprised of individuals, and that each individual makes distinct choices. The theory also acknowledges the impact of groupthink, particularly in the context of homogenous cultures. This study joins a recent movement of scholars incorporating the theory to examine the impact of groupthink on media choices within homogeneous groups.

For example, Abrams (2008) incorporated the uses and gratifications approach and found that in-group perceptions affect choices of African American television activity. Băltarețu & Balaban (2010) used the same perspective to examine how peer groups influenced participants to use social networking sites, such as Facebook. They found that peer groups had a strong influence on choices to adopt different social networking sites. Similarly, this study examined
students in a religious environment with a strong emphasis on achieving consensus. While the majority of students at Bluffton University are not Mennonite, the institutional structure and leadership are built on Anabaptist principles of homogeneity, agreement and adherence to common standards, and consensus building activities.

This study extends the uses and gratifications theory into an area that examines the collective, rather than individual, nature of gratifications sought and obtained. Nonetheless, it maintains the integrity of the theory in recognizing that the individual retains the agency to make individual choices. In other words, while the individual is still accountable for decisions regarding media consumption, the psychological implications of collective culture and groupthink are embraced as part of that individual decision.

**Practical Implications for Religious Leaders**

In addition to extending theory, this study offers practical implications, particularly for religious leaders. This next section details practical implications, describes the current use of technology, and ends with a charge for religious leaders to adopt this type of empirical study rather than moving toward adoption of stylistic preferences based solely on assumptions.

This exploratory study brought the uses and gratifications approach into the often unavailable world of Mennonite institutions, offering a framework for studying these and related issues. It opened the door to utilize this approach in conjunction with other, statistically-proven instruments, such as the Personal Involvement Inventory (Rubin, 2004), the Student Motivation Scale (Beatty, 2004), the Television Viewing Motives Scale (Perse, 2004), the Behavior Alteration Techniques Scale (Kearney, 2004).

In these ways, this study contributes to the literature in several fields. Additionally, it encourages participants to think critically about their preferences and exposes them to
considering those preferences with a scientific understanding, while yielding empirical data for professionals and church leaders interested in the preferences of young people. Therefore, this study simultaneously contributes valuable information to those non-academics making assumptions about young people, to the body of knowledge in academia, as well as to those participating in this research project.

*Current Use of Technology in Worship*

It’s important to return to the practical aspects of this study, since that was the initial impetus of the project. Large amounts of money are at stake for congregations and religious leaders, as well as cultural practices and religious distinctions. This section briefly highlights the current context of technology use in larger congregations which place a certain pressure on even the smallest congregations. This section precedes a charge for religious leaders to investigate preferences of congregants through use of empirical means before making decisions regarding stylistic changes and expending both human and financial resources toward an ambiguous goal.

As religious broadcasts increase across media spectrums, this type of research is increasingly necessary (Blumhofer, 2004; Campbell, 2005; Howard & Streck, 1999; Linton, 2000; Tsitsos, 2000). Televangelists have been doing market research since the 70s (Greenfeld, 2008), but scholars have yet to fully address this issue. Academics have considered the role of religious programming via radio and television, but have yet to tackle the current state of media in worship services.

For example, Carey (1989) describes the role of religious broadcasters utilizing radio in the 1930s, noting that many saw the media as their utopian dream come true. At that point, the broadcast content often mirrored the big tent revival message of hope for a more stable future was certain. No money was to be made at that time, but revenues began to explode in the 1970s
with the arrival of televangelists and their annual record-breaking amounts of money raised (Greenfeld, 2008).

Billy Graham, who formed the Billy Graham Evangelistic Association (BGEA) in 1950, was quite successful in transitioning from radio to television broadcasts. The BGEA posted more than $92 million in revenue during 2008. Billy Graham, President of the organization, earned slightly more than $200,000 while his son, William Franklin Graham earned $267,000 as CEO that same year (Charity Navigator, 2009). That revenue was not enough to keep BGEA from cutting its staff by 10% in 2009, due to declining book and product sales and a drop in donations (Riley, 2009). The BGEA reported a deficit of nearly $55 million in 2008 (Evangelical Council for Financial Accountability, 2009).

One of the more prominent religious broadcasters today is Joel Osteen, pastor of Lakewood Church in Houston, Texas, whose background is in marketing and television production. Osteen’s $13 million advance for his 2007 bestseller, Become a Better You (Heilpern, 2010), dwarfed the combined Graham salaries, and that advance did not include the 19 spinoff calendars developed after the book (Greenfeld, 2008). The Osteen organization has annual revenue of more than $75 million coming from donations and product sales. While the BGEA appears to have had a better year in 2008, it is important to note that the Graham revenues are subsidized by more than 60 years of financial investments, and the BGEA is losing money and cutting staff (Riley, 2009).

In addition to Osteen’s multiple best-selling books and a weekly television audience of more than 7 million viewers, Osteen has a powerful impact online with 4.5 million downloads of his podcast sermons each week. The 45,000 regular weekly attendees gather in the refurbished Compaq Center, formerly the home of the Houston Rockets, which Osteen leased from the City
of Houston and paid $98 million to redecorate. The remodel includes two 30-foot waterfalls, a $25 million children's center designed by former Disney employees, and every available technology to produce the highest level video, audio and web broadcasts (Greenfeld, 2008). Greenfeld notes that “Osteen says, ‘You can’t separate the message from the presentation of that message.’” (p. 3), so every detail of the presentation counts. Nonetheless, Osteen still considers “the writing, shaping, and memorizing of his sermons to be the single most important part of his job … the message supports the whole enterprise” (Greenfeld, p. 3). Additionally, Osteen's content continues to produce best-selling books void of any digital technology for delivery. This means that one could argue that Osteen's success has more to do with his content than with his delivery.

Other current televangelists also dedicate large budgets for media broadcasts. Bill Hybels and Willow Creek Community Church in South Barrington, Illinois, have an annual budget of $28.6 million. Bob Coy, pastor of Calvary Chapel in Fort Lauderdale, Florida, has an annual budget of $66.6 million. Rick Warren and Saddleback Church in Lake Forest, California, spends $35.3 million each year. Dave Stone, of Southeast Christian Church in Louisville, Kentucky plans on more than $30.6 million annually. While Osteen boasts the largest congregation in the nation, he is not without competition (Heilpern, 2010).

Competition comes from those who avoid technology in worship services. For example, Heilpern (2010) describes Osteen's message as an “optimistic, anti-Calvinist 'prosperity gospel' – with its emphasis on success and happiness” (p. 1). While Osteen’s Lakewood Church boasts the largest audience in the US, it is equally clear that the Calvinistic and Fundamentalist churches are currently experiencing tremendous growth as well (Burek, 2010; Twenge, 2006). That growth is less apparent and less celebrated, but the growth is clear. These groups often echo the
concerns of scholars such as Carey (1989), Schultze (2003), Murray (2006), and Tufte (2006), who each express concerns about the technology becoming more of a focus than the content of the message.

*Charge for Religious Leaders*

This study serves as an example of how religious leaders might begin to explore questions surrounding the utilization of music and technology in the context of Christian worship. Rather than adopting whatever method seems to work for a different congregation, religious leaders might begin with the collection of empirical data, as opposed to the current state of relying on personal observation and sparse market research (Strauss & Howe, 2006; Cho, 2005).

The results of this study were statistically meaningful, which is important given that this topic continues to be debated. The topic is addressed in comic book series, television sitcoms, movies, and popular press. For example, there are more than twenty episodes of *The Simpsons* that deal directly with religion, and *King of the Hill* offers more than ten. A recent comic book based on the New Testament of the Christian Bible is currently available in over fifty languages. The dark comedy movie *Saved!* (2004), boasts and all-star cast while dealing with many of the same issues addressed in this study, such as contemporary music styles and technology. Additionally, *The Christian Science Monitor* routinely runs articles related to the issues addressed in this work. This study offers empirical data and meaningful statistics to help religious leaders consider these topics.

The practical implication from this study is for religious communities to examine questions before adopting stylistic preferences based solely on assumptions. Congregational leaders should consider all of the costs associated with stylistic changes before committing to
them. What might work for one congregation may not work for another. Both Gooch (1996) and Schultze (2003) offer examples of seemingly radical approaches that worked well in one context and failed miserably in another. In all cases, it appears that no empirical evidence was gathered.

This study introduces an exploratory model to religious leaders, encouraging the inclusion of the uses and gratifications perspective to understand the issues involved. This theory will help religious communities to connect and examine uses as separate, but connected to, gratifications obtained. The two are correlated but different. The results of this study reveal that people seek out and receive different gratifications (Palmgreen, et al., 1985). Religious leaders who understand these studies would see that while they develop the best sermon listeners may not listen. Further, listeners may never place themselves in a position to hear the message in the first place. More importantly, religious could develop an understanding as to why listeners may avoid their message.

Future Research

This exploratory research project opened the door to several new areas of research. However, there is still more work to complete in order to gain a better understanding of university student preferences toward the utilization of music and technology in the context of Christian worship. First, areas to improve are addressed, including better communication between the researcher and the community gatekeepers, the use of statistically proven instruments, gaining a higher response level by incorporating other on-campus departments, and utilizing additional methodologies such as focus groups and interviews. Second, there are several related topics and additional contexts in which this type of research might be conducted. Areas of expansion for this project include work on gender and religiosity among university students, exploration of congregations who have transitioned from one style to another, the examination of
the use of social media in the context of worship, and expanding this study regarding music and technology preferences of university students across religious affiliation.

Areas to Improve

There were several challenges encountered in this study. First, there were interpersonal difficulties such as access to students and the resistance to an outside researcher. Conscious and subconscious resistance to individuals who are not members of an in-group is common in research and can lead to challenges in gaining access to subjects, information, and openness (Geertz, 1973).

The resistance led to the second challenge, the development of an instrument with non-relevant questions. Based on previous experiences, gatekeepers in this community were concerned about how any study might represent members of their community. Therefore, instead of using proven statistical measures of religiousness, and media uses and gratifications, a self-generated instrument was utilized for this study. Additionally, some on-campus groups wanted this instrument to address questions outside the scope of this project. Thus, the final version of the instrument contained several questions which were ultimately irrelevant to this study and statistically insignificant (see Table 1 in chapter 3); however, the instrument still managed to yield some important and statistically significant findings. Based on the relationship established through this study, future research could utilize existing, statistically proven instruments.

Based on the results of this study, there is great promise for a larger study utilizing proven measures, such as the Personal Involvement Inventory (Rubin, 2004, p. 286), the Student Motivation Scale (Beatty, 2004, p. 343), the Television Viewing Motives Scale (Perse, 2004), or a combination of these measures. Additionally, the Behavior Alteration Techniques Scale
(Kearney, 2004), could be altered in order to examine the relationship between a religious leader and the associated congregants.

Third, a higher response rate would have been helpful. There were two reasons for the low response rate. The first reason for the low response rate was that the researcher did not communicate widely enough about the survey with potential participants and gatekeepers. While attempts were made, ultimately the announcements did not go out. For example, the researcher asked to have announcements made before Chapel services, but this did not happen. Additionally, the person overseeing B.A.S.I.C. groups was asked to encourage announcements to be made in those small group meetings, but this also did not happen. The second reason for the low response, which is tied to the first, is that a similar survey came out just before this one resulting in confusion among students. The other survey, which focused on Chapel services and B.A.S.I.C. group activities, was sent out two weeks before this survey. Many students who saw the instrument connected with this study assumed they had already responded to this survey when they had not.

Fourth, it may be determined that approaching the question with a combination of quantitative and qualitative methods produces the richest results. The experience gained from this exploratory study offers great potential to include focus groups to explore explanations of media usage and the perceived relationships with worship practices. Adopting a mixed method approach to this topic and with this population has promise. Given the nature and practice of Mennonite institutions, the use of focus groups might be more welcome than an approach using only surveys.
Areas of Expansion

Some of the most meaningful findings of this study centered on differences based on gender. Therefore, one of the most obvious choices for future research is to explore connections between gender and religiosity among university students at a religious institution. A uses and gratifications approach would work well when investigating the differences in rationale for using certain types of media for religious or other purposes.

An additional area for future research is to examine congregations who have moved from no technology use to regular usage of technology in the worship service. Since this topic continues to be widely debated in both academic and non-academic circles, there continues to be a large pool of research participants deeply engaged in these questions. Congregations across the nation move from more traditional to more contemporary services. This sort of study could consider how the leaders communicate changes, how the congregation adapts, and how the content of their message might be affected by the use of digital media for delivery.

It is conceivable that the use of Twitter, Facebook, MySpace and other social media might influence expectations of content. Further, the use of podcasts and other alternative delivery methods could be investigated to determine the effectiveness of their use. Related studies could examine connections between religiosity and Twittering. Variables in the area of religiosity may affect the use of Twitter. Congregational use of Twitter could be explored. Additional social media forms could also be explored. For example, the uses and gratifications perspective could be used to study how church leaders interact with congregants via Facebook and MySpace. This sort of approach would build on recent studies using the uses and gratifications approach to explore related topics (Loomis, 2004; Richardson, 2003)
Perhaps this could lead to research with youth across religious spectrums. Some of the largest and fastest growing religious groups fall outside of what is considered to be mainstream Christianity. Most of these groups utilize little, if any, technology in any current or digital form. Investigating preferences among groups such as Mormons and Catholics could yield important data. Additionally, expanding this line of research in among Muslim and Hindu groups could also produce valuable data for consideration among a wide spectrum of scholars.

**Conclusion**

This research project investigated preferences of university students regarding the use of music and technology in the context of Christian worship services. During the spring semester of 2009, a survey instrument was distributed via campus mailboxes to all students enrolled full-time in the regular program at Bluffton University. The instrument was designed to gauge preferences toward the use of music and technology in Christian worship in the areas of technology use and current preferences; past worship experiences and current preferences; and, on-campus religious activities of students and their current preferences.

This study produced two key findings directly related to the research questions. First, students more involved with on-campus religious activities have stronger preferences toward the use of technology and contemporary music in worship. Second, students who report a higher level of technology use in their daily lives have stronger preferences toward the utilization of technology in their worship services. This exploratory instrument could not effectively answer questions regarding past experience and current preferences.

Additional findings centered on differences between how male and female students responded to the instrument. The findings include that female students at Bluffton university tend to pray, read the Christian Bible, and attend worship services more frequently than male students.
at Bluffton. More women than men at Bluffton report that their faith impacts choices related to interaction with books, magazines, music, television, movies, and websites. Women, more than men, report that they cultivate stronger connections to their faith through their use of media devices. Finally, women report greater levels of gratifications obtained based on their on-campus religious activities than do men.

Those considering issues related to this study should take away several key points. First, that the use of technology and contemporary music styles in Christian worship services may have nothing to do with the attendance choices of young people. Second, when technology is used in a service, university students expect more from a service than the use of a particular technology component. Third, religious leaders need to understand that young women could be a key component to developing an understanding of this issue and how congregations might address their concerns.
REFERENCES


INFORMED CONSENT
(Survey)

This anonymous survey is part of a research project conducted by Daniel D. Fultz, a doctoral student at Bowling Green State University and a visiting assistant professor in the communication and theatre department at Bluffton University. The survey is designed to address questions about the worship preferences of college-aged students in a church setting, specifically regarding music style and technology use. The survey asks for about your previous experiences with, and current preferences regarding music and technology in a Christian worship setting, as well as general information (age, gender, etc.). This survey has been distributed to all fulltime, traditional degree seeking students at Bluffton University (approximately 800 students) and should take no more than ten minutes to complete.

The risks of participating in this survey are no greater than those encountered in normal daily life. The benefits of your participation in this study include adding to the scholarship in religious communication studies, encouraging you to consider the role of music and technology in your religious preferences and practices, and assisting religious leaders in liturgical planning geared toward your age group. The completed anonymous surveys will be stored in a locked file cabinet.

You are not obliged to complete this survey and are free to withdraw at any time. Your decision to participate in this study will not impact your grades, your class standings, or your relationship to the researcher or to Bluffton University. By voluntarily completing and returning this survey to box #132, you are consenting to be a part of this research study. Should you have questions regarding this research project, you may contact Daniel D. Fultz, Researcher [fultzd@bluffton.edu or (419) 358-3342] or Dr. Catherine Cassara-Jemai, Committee Chair [ccassar@bgsu.edu or (419) 372-2372]. Should I have questions about my rights as a research participant, I may contact the Chair, Human Subjects Review Board [hsrb@bgsu.edu or (419) 372-7716].
This survey asks you to think about your preferences regarding the use of music and technology in Christian worship services. You will be asked about your own use of technology and media, your worship experience and preferences, and how your faith impacts your decisions regarding music and technology.

**Place an X on the line nearest your answer**

1) I use an Ipod (or similar media device) …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>every day</td>
<td>once a week</td>
</tr>
<tr>
<td>never</td>
<td></td>
</tr>
</tbody>
</table>

2) I visit websites …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>every day</td>
<td>once a week</td>
</tr>
<tr>
<td>never</td>
<td></td>
</tr>
</tbody>
</table>

3) I watch television or movies …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>every day</td>
<td>once a week</td>
</tr>
<tr>
<td>never</td>
<td></td>
</tr>
</tbody>
</table>

4) The church I attended before coming to Bluffton used digital video projection …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>in every service</td>
<td>once</td>
</tr>
<tr>
<td>never</td>
<td>monthly</td>
</tr>
</tbody>
</table>

5) The song style of the church I attended before coming to Bluffton was …

| traditional                   | equal mix                      |
| hymns only                    | praise & worship               |

6) Musical accompaniment in the church I attended before coming to Bluffton was …

| drums and electric guitars    | only piano                     |
| and/or organ                 | no use of instruments         |

7) My current preference for the use of digital video projection in worship is …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>in every service</td>
<td>once</td>
</tr>
<tr>
<td>never</td>
<td>monthly</td>
</tr>
</tbody>
</table>

8) The song style I am most comfortable with today is …

| traditional                   | equal mix                      |
| hymns only                    | praise & worship               |

9) Musical accompaniment I am most comfortable with today is …

| drums and electric guitars    | only piano                     |
| and/or organ                 | no use of instruments         |

10) I pray …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at least daily</td>
<td>monthly</td>
</tr>
<tr>
<td>never</td>
<td></td>
</tr>
</tbody>
</table>

11) I read the Bible …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at least daily</td>
<td>monthly</td>
</tr>
<tr>
<td>never</td>
<td></td>
</tr>
</tbody>
</table>

12) I attend worship services …

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at least weekly</td>
<td>monthly</td>
</tr>
<tr>
<td>never</td>
<td></td>
</tr>
</tbody>
</table>
**Place an X in the box nearest your answer**

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>13) I often use an Ipod (or similar media device) to listen to Christian music or programming</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>14) I often visit websites associated with Christianity</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>15) I often watch Christian television or movies</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>16) The use of digital video projection would important in my choice of a new church</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>17) Song style (i.e., hymns or praise/worship) would be important in my choice of a new church</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>18) Musical accompaniment (e.g., drums vs. piano) would be important in my choice of a new church</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>19) I regularly attend Bluffton University Chapel</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>20) I regularly attend a Bluffton University B.A.S.I.C. group</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>21) I actively participate in and/or contribute during worship services</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>22) I refer to teachings from my faith when making important decisions in my life</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>23) My faith is important when I choose what to read (books, magazines, etc)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>24) My faith is important when I choose what to watch (movies, television, etc)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>25) My faith is important when I choose what kind of music to listen to</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>26) My faith is important when I choose what websites to visit</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>27) I am ☐ female ☐ male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28) I am ☐ ______ years old</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If this subject interests you, please feel free to use the back of this page to provide written comments.

Thanks for completing this survey – please return it to Marbeck box #132
APPENDIX B: CODEBOOK

Style matters: Worship preferences of university students regarding the use music and technology

Codebook / Training Session

You will be transferring the data from the survey to an Excel spreadsheet.

First, check item 28 to make sure that the respondent is between the ages of 18-22. If the respondent is not, stop the coding and put the survey aside.

Items 1 through 12 are on a three-point Likert-type scale.

Items 1-3: enter 20 for “every day”; 15 for any response between “every day” and “once a week”; 10 for “once a week”; 05 for any response between “once a week” and “never”; and 00 for “never”.

Item 4: enter 20 for “in every service”; 15 for any response between “in every service” and “once monthly”; 10 for “once monthly”; 05 for any response between “once monthly” and “never”; and 00 for “never”.

Item 5: enter 20 for “traditional hymns only”; 15 for any response between “traditional hymns only” and “equal mix of both”; 10 for “equal mix of both”; 05 for any response between “equal mix of both” and “praise and worship only”; and 00 for “praise and worship only”.

Item 6: enter 20 for “drums and electric guitars”; 15 for any response between “drums and electric guitars” and “only piano and/or organ”; 10 for “only piano and/or organ”; 05 for any response between “only piano and/or organ” and “no use of instruments”; and 00 for “no use of instruments”.

Item 7: enter 20 for “in every service”; 15 for any response between “in every service” and “once monthly”; 10 for “once monthly”; 05 for any response between “once monthly” and “never”; and 00 for “never”.

Item 8: enter 20 for “traditional hymns only”; 15 for any response between “traditional hymns only” and “equal mix of both”; 10 for “equal mix of both”; 05 for any response between “equal mix of both” and “praise and worship only”; and 00 for “praise and worship only”.

Item 9: enter 20 for “drums and electric guitars”; 15 for any response between “drums and electric guitars” and “only piano and/or organ”; 10 for “only piano and/or organ”; 05 for any response between “only piano and/or organ” and “no use of instruments”; and 00 for “no use of instruments”.
Items 10 and 11: enter 20 for “at least daily”; 15 for any response between “at least daily” and “monthly”; 10 for “monthly”; 05 for any response between “monthly” and “never”; and 00 for “never”.

Item 12: enter 20 for “at least weekly”; 15 for any response between “at least weekly” and “monthly”; 10 for “monthly”; 05 for any response between “monthly” and “never”; and 00 for “never”.

Items 13 through 26: enter 1 for “strongly agree”; 2 for “agree”; 3 for “neutral”; 4 for “disagree”; and 5 for “strongly disagree”.

Item 27: enter 1 for “female” and 2 for “male”.

Enter the numerical data for item 28.

After finishing the quantitative portion of the survey, sort the questionnaires into two piles: one for surveys with comments and one for surveys without. Enter the survey number followed by any comments into a Word document, triple spacing between each survey comment. This document will be reviewed, and themes will be identified for use in future research, possibly incorporating focus groups.

Coding can be a very tiring business. Feel free to get up and walk around, etc. before you get tired. Snacks, drinks, and pizza are available and the restrooms are across the hall.