A STUDY OF THE IMPACT OF MOBILE PHONES
AS LEARNING TOOLS FOR YOUTH IN
SOUTHERN BAPTIST CHURCHES

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This study sought to determine the differences between students using mobile phones and students without the use of mobile phones in youth Bible studies in selected Southern Baptist churches. Differences between groups on cognitive test scores, affective test scores, student motivation scores, and sociometric scores were tested.
ABSTRACT

The problem of this study was to determine the differences between two groups of learners across four specified learner variables. The two groups were students using mobile phones and students without the use of mobile phones in youth Bible studies in selected Southern Baptist churches. The four learner variables were cognitive test scores, affective test scores, student motivation scores, and sociometric scores.

A test was administered to randomly assigned groups of youth ages fourteen to eighteen in the spring of 2012. Students in the control group participated in a three session Bible study without the use of mobile phones, while students in the experimental group completed the Bible study with mobile phones. The students represented three churches from Midland, Ellis, and Gaines County, Texas. The means of the cognitive, affective, student motivation, and sociometric scores were compared to test for significant differences between students using mobile phones and students without mobile phones. The Independent Samples t-Test was used to compare mean scores and test for significant differences. A total of fifty-one students’ tests qualified for the study.

The Independent Samples t-Test revealed significant differences in student motivation scores between the control group and experimental group with the students using mobile phones scoring higher on motivation to learn. In addition, a significant difference was found between groups on affective scores with students using mobile phones scoring higher. No significant differences were found in cognitive learning scores. The sociometric scores indicated no negative impact on social interaction. The qualitative portion of the study found that students using mobile phones were more interested and excited to learn than students without mobile phones. Youth leaders and educators should consider using mobile phones to motivate students. In addition, when developing Bible study curriculum for youth, designers should give special attention to options for the use of mobile phones.

Introduction

According to Senter, the discipleship and Christian education of young people have been priorities of Southern Baptists for over a hundred years. Though strategies have changed and methods have adapted, the emphasis on teaching adolescents has remained constant. From small group Bible studies to large group lecture methods, church youth ministries have developed a variety of teaching strategies to educate students. Yet these methods may not take into account the new ways in which contemporary adolescents learn.

Digital technology has become increasingly important to teenagers in the last decade. Jewel states that the cell phone, in particular, has become an integral part of how teenagers communicate with family and friends. According to Lenhart, seventy-five percent of 12-17 year-olds in the
United States own a cell phone. However, no research exists concerning mobile learning with young people in a church environment. Therefore, research was needed to determine the impact mobile phones might have on learning in a church setting.

**Scope of Project**

The purposes of the study were to determine the impact mobile phones have on cognitive learning for students in a youth Bible study; to ascertain the impact mobile phones have on affective learning in a youth Bible study; to discover the impact mobile phones have on student motivation to learn in a youth Bible study; to determine the impact mobile phones have on student social engagement in a youth Bible study; to ascertain the need for the integration of youth Bible study curriculum with mobile phones; and to discover what aspects of mobile learning teenagers enjoy and find educationally useful in a youth Bible study. The population of this study consisted of all fourteen to eighteen year olds who agreed to participate in the study from three Southern Baptist Churches. The churches were First Baptist Church, Midland, Texas; First Baptist Church, Midlothian, Texas; and First Baptist Church, Seminole, Texas. The sample of this study consisted of students from the volunteer student population who expressed interest in the study and were available to participate in each session. Fifty-one students from three churches comprised the study group.

The design of this study was experimental in nature with a post-test control group for the variables of cognitive learning, affective learning, student motivation, and sociometric engagement. The group using mobile phones as learning aids served as the treatment. After finishing the unit, both groups completed the Bible Knowledge test, Outlook On Service test, Student Motivation Scale, and Sociometric Evaluation. In addition, both groups completed separate post-session questionnaires. The Bible Knowledge test and Outlook On Service test were instruments developed by the researcher to measure learning gains in the study. The Student Motivation Scale was developed by Christophel to
measure motivational states in students. Sociometric engagement was measured using sociometric techniques developed by Moreno. The Cronbach’s alpha coefficient for the Bible Knowledge test was 0.84. The reliability of the Outlook On Service test was 0.758. The Cronbach’s Alpha of the Student Motivation Scale was 0.82.

The first hypothesis of this study was that learners using mobile phones would score significantly higher in cognitive test scores than learners without the use of mobile phones. The second hypothesis of this study was that learners using mobile phones would score significantly higher in affective learning than learners without mobile phones. The third hypothesis of this study was that learners using mobile phones would score significantly higher on the Student Motivation Scale than learners without mobile phones. The fourth hypothesis of this study was that learners using mobile phones would score significantly higher in Sociometric Evaluation than learners without mobile phones. The study used the t-Test for Independent samples to compare group means and test for significant differences between the two groups.

**Discussion**

The first statistical hypothesis of this study, stated in the null form, was that no significant difference would exist between learners in both groups on the Bible Knowledge test scores. The t-Test of Independent Samples was used to compare the Bible Knowledge scores between learners with mobile phones and learners without mobile phones. The level of significance for the t-Test was set at \( p = 0.05 \). There was no statistically significant difference in scores for students without mobile phones (\( M = 83.64, \ SD = 11.686 \)) and students with mobile phones (\( M = 84.12, \ SD = 9.61 \)); \( t (49) = .16, \ p = .87 \) (two-tailed). The magnitude of the differences in the means was very small (eta squared .0005). The null was retained for Bible Knowledge scores.
The second statistical hypothesis of this study was that no significant difference would exist between learners in both groups on Outlook on Service test scores. This was tested using the t-Test of Independent Samples to compare the Outlook on Service scores between learners with mobile phones and learners without mobile phones. The level of significance for the t-Test was set at \( p = 0.05 \). There was a statistically significant difference in scores for students without mobile phones (\( M = 69.80, \ SD = 7.03 \)) and students with mobile phones (\( M = 73.69, \ SD = 6.93 \)); \( t (49) = 1.99, \ p = .05 \) (two-tailed). Students with mobile phones scored significantly higher. The magnitude of the differences in the means was a medium effect size (eta squared .08). The null hypothesis for Outlook on Service scores was, therefore, rejected.

The third statistical hypothesis of this study was that no significant difference would exist between learners in both groups on Student Motivation Scale scores. This was tested using the t-Test of Independent Samples to compare the Student Motivation Scale scores between learners with mobile phones and learners without mobile phones. The level of significance for the t-Test was set at \( p = 0.05 \). There was a statistically significant difference in scores for students without mobile phones (\( M = 71.32, \ SD = 14.97 \)) and students with mobile phones (\( M = 79.23, \ SD = 8.85 \)); \( t (49) = 2.31, \ p = .03 \) (two-tailed). Students with mobile phones scored significantly higher. The magnitude of the differences in the means was a large effect size (eta squared .10). The null hypothesis for Student Motivation Scale scores was rejected and the research hypothesis was supported.

The fourth statistical hypothesis of this study was that no significant difference would exist between learners in both groups on the Sociometric Evaluation of engagement. This was tested using the criterion question: Which person in your group would you most like to work with on a class project? Student responses to the pre-test and post-test sociometric criterion question were graphed as a sociogram for first and second choice. For each individual who changed a first choice response, two
points were awarded to the group. For each individual who changed a second choice response, one point was awarded. Each group’s total number of points was divided by the number of people in the group to produce a sociometric score. The difference between groups was tested using the t-Test of Independent Samples. The level of significance for the t-Test was set at $p = 0.05$. No significant difference was found in scores for students without mobile phones ($M = 1.20$, $SD = 1.35$) and students with mobile phones ($M = 1.00$, $SD = 1.23$); $t (49) = 0.55$, $p = .58$ (two-tailed). The magnitude of the differences in the means was a very small effect size (eta squared .006). The null hypothesis for Sociometric Evaluation scores was retained.

The findings from testing hypothesis 1 showed no significant difference between groups in cognitive learning. However, both groups were able to experience learning. The results indicate that the use of mobile phones did not hinder knowledge gain among students. One factor that may have influenced this outcome was the location of the study in a church setting. Students may have already been familiar with cognitive ideas and concepts on which they were tested.

The findings from testing hypothesis 2 showed a significant difference between groups in affective learning, with students using mobile phones scoring higher. That is, they had a more positive attitude toward serving than students without mobile phones. Affective learning outcomes are linked to the emotional connections students have with a subject. The Bible study topic of service, combined with the personal connection students felt to their mobile phones, resulted in higher scores. Another factor contributing to the higher affective scores was the affirming experiences from the anonymity of the text message responses. Students answered questions without fear of ridicule from peers. In addition, students felt affirmed when their anonymous responses received positive feedback from the group. These positive feelings seem to have translated into positive opinions toward the subject matter. Finally, there was the connection between individual use of mobile phones and personal
commitment to service. When learners see the importance of the subject and make a commitment to become personally involved, they demonstrate the affective domain state called valuing. These findings support other studies in which mobile phones positively impacted affective learning in students.

The findings from testing hypothesis 3 showed that students using mobile phones scored significantly higher on the Student Motivation Scale. The questions on the Student Motivation Scale were designed to gauge the learners’ attitudes and motivation for learning. These results indicated that students with mobile phones were more motivated than the other group to participate in another study of this kind. The motivation may have been inspired by the novelty of using mobile phones in a learning situation. However, these results confirm other research into the use of mobile phones as a motivation to learn. Students are interested in mobile phones and this interest seems to translate to an intention to learn. This study provides empirical data to help support the fact that mobile phones can positively impact student motivation to learn.

The findings from testing hypothesis 4 showed no significant difference between groups in social engagement. One important note concerning these results is that the use of mobile phones did not negatively impact social interaction in the classroom. These findings counter the argument that mobile phones prohibit social interaction in the classroom.

Theological and Ministry Implications

The world has gone mobile. From smart phones to portable tablets, mobile devices have become the leading edge of technological innovation. This study demonstrated ways in which mobile phones can positively impact student motivation and attitude toward learning. These results have three profound theological implications for the Christian education of today’s young people. First, mobile phones can be highly effective digital tools to motivate youth to study the Bible. Second, the use of
these devices can provide new and innovative ways to share the gospel. Third, mobile phones provide today’s youth workers with unique opportunities to make personal connections with adolescents.

Christian education is about effectively communicating the truth of God’s Word. Garrett says this is crucial because the Bible is the “rule of faith and practice” for believers. According to Yarnell, the Bible is also the “theological authority” for personal faith. In today’s technological age, Christians must use digital tools to motivate youth to study the Bible and “stir up one another to love and good works” (Hebrews 10:24). This study provides sound research to continue moving the biblical mandate of Christian education into the twenty-first century.

Technology advancements throughout the centuries have been used by Christians to proclaim the gospel and educate believers. Theology and technology expert, Robert Crosby, says that cell phones can be used as a modern Roman road. This study supports the idea of using mobile phones as a way to reach today’s adolescents with the gospel message.

Finally, mobile phones offer today’s youth workers unique opportunities to connect with teenagers. Jesus’s life was characterized by personal connections. According to John 10:30, Jesus had a unique relationship with God the Father. In addition, he developed close relationships with his disciples. In John 13:34, Jesus encouraged his followers to love one another “as I have loved you.” The Apostle Paul also admonished believers to show love to one another (Romans 13:8). Scripture clearly indicates that personal connections are to be a priority in a Christian’s life. Students increasingly use mobile phones to stay connected with the people in their lives. Therefore, mobile phones are an affordable technology that youth leaders can use to connect with teenagers. In this way, mobile phones become indispensable tools for today’s ministers and Christian educators.
Bibliography


About the Author

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