ABSTRACT

Title of Dissertation: A CASE STUDY OF COMMUNITY COLLEGE
STUDENTS' PERCEPTIONS REGARDING IPAD USE
AND THEIR ACADEMIC ACHIEVEMENT

Deloris Rice Smothers, Doctor of Education, May 2019

Dissertation Chair: Leah P. Hollis, EdD
Community College Leadership Program

The TRiO Program is not an acronym; it refers to a number (initially three,

now eight) of U.S federal programs, which increase access to higher education

for economically disadvantaged students. TRiO programs are designed to assist

first-generation college students, persons with disabilities, and low-income

persons. This qualitative research study examined the TRiO students'

perception of iPad usage and how the iPad contributed to students achieving

their course objectives. Achievement Goal Theory, used to frame this study, is a

framework for understanding the principles used to measure success. In

addition, the Achievement Goal Theory explains why people participate in

achievement-related behavior (Ames, 1992a; Dweck & Leggett, 1988; Nicholls,

1984). The researcher collected and analyzed the qualitative data from student

interviews, as well as an administrator, and three teachers' observations. In

addition, a syllabus was reviewed to know how much the iPad was used for

completing assignments. The researcher utilized a convenience sample of ten

community college students who had been using the iPad either in class or the

TRiO lab.

The findings showed that most the students adopted the iPad in their academic lives and judged the iPad along with existing instructional technology in the classroom. Students indicated that they achieved course objectives in the class. The results also indicated that, according to the administrator and teachers, the use of the iPad in the classroom and lab was beneficial to the students' performance in the classroom. These findings resulted in the following four themes regarding TRiO students' perception of iPad usage and their academic achievement: accessibility, interaction in the classroom with applications and different programs, benefits of iPads, and improved study skills. The benefits of iPads and accessibility were the two dominant themes found throughout the research.

A CASE STUDY OF COMMUNITY COLLEGE STUDENTS' PERCEPTIONS

REGARDING IPAD USE AND THEIR ACADEMIC ACHIEVEMENT

By

Deloris Rice Smothers

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

MORGAN STATE UNIVERSITY

May 2019

A CASE STUDY OF COMMUNITY COLLEGE STUDENTS' PERCEPTIONS

REGARDING IPAD USE AND THEIR ACADEMIC ACHIEVEMENT

by

Deloris Rice Smothers

has been approved

February 2019

DISSERTATION COMMITTEE APPROVAL:

_____, Chair
Leah P. Hollis, EdD

_____
Michael H. Parsons, EdD

_____
Sandra K. Durham, PhD

DEDICATION

I dedicate this dissertation to the memory of my father, Mr. Bill Rice Jr., who taught me the meaning of working hard, loving life, and supporting my family. Additionally, this dissertation is to honor my mother who believed in me when I did not believe in myself. I love you dearly, Mama. Furthermore, I dedicate this dissertation to my husband, William Smothers, for his unwavering support; to my sisters, Genevia Hughes, Carolyn Washington, and Kathy Rice, for their unconditional love and support; my brothers, Billy Rice and Michael Rice, for their loving strength; my sisters-in-law, Katrina and Rose; my brother-in-law Booker T. Washington; my nephews, Marcus Hughes, Marshall Hughes Jr., Ashley Rice, Alston Rice, and Mitchel Rice; my great nieces, Taylor, Anaya, Nicole, and Natalie; my great-nephews, Justin, Tyran, Kingston, Princeton, and Hughston; my aunt, Marie Jacobs; my step-daughters, my grandsons and grand-daughters; my dear cousins, Doris Jacobs, Esq., Joann, Pamela and Mary; my dear friends, Beth, Kemba, Patricia, Gayla, Candice, Rebecca, Elaine and Jonelle; my pastor, Rev. Dr. Edward Anderson, and some special cousins, Dr. John W. Humphrey and Marsha Readus. Without their patience, consideration, support, and faith in me, this dissertation would not have been possible.

ACKNOWLEDGEMENTS

Table Contents

Chapter 1: Introduction

The iPad, introduced by Apple in 2010, has been one of the most rapidly implemented digital technology devices used by Americans and global citizens (Banister, 2010). According to Alyahy and Gall (2012), more than 1.5 million iPads are used for training graduate students, community college students, high school students, and elementary school students. Furthermore, software developers have created over 20,000 educational applications to service all age and grade levels in education (Alyahy & Gall, 2012).

College students utilize iPads to share ideas and to, have student-teacher and student-student interactions. Further, college students utilize the iPads to read electronic textbooks and eBooks. Documentation on the use of iPads is found at the graduate level, four-year level, and two-year level (Lahmers & Tresler, 2015). Within the two-year and four-year context, TRiO programs have also used iPads. For example, the University of Utah, a four-year college, presently operates two TRiO Programs, Student Support Services (SSS) for college students and Upward Bound (UB) for high school students, which provides fundamental support to participants in their preparation for college entrance. The TRiO programs at the University of Utah are designed to be supportive environments, which empower underrepresented students to access postsecondary education, as well as assist students in attaining educational success leading to a postsecondary degree (University of Utah, 2018). In addition, the University of Utah intentionally and firmly implemented and utilized iPads to advance, develop, and increase student proficiency and effectiveness.

The University of Utah TRiO program also provides students with access to iPads in their labs. The TRiO staff is adequately trained to use iPads, so they can assist students with completing assignments, conducting research and implementing projects (University of Utah, 2018). Lane Community College is an example of a two-year school that has a TRiO Learning Center, which operates one TRiO program, as well as Student Support Services (SSS), which provides the following services:

1. Individual and small group tutoring in math, writing, computers, and science

2. Mentoring

3. Educational advising

4. Information and recommendation to services on and off campus

5. Career and personal counseling

6. Computer lab (Lane Community College, 2018)

In another example, the TRiO Learning Center's goal at Lane Community College is to assist students in staying in college. A subsequent goal is for Lane Community College to successfully graduate students and assist them in transferring to a four-year institution. Furthermore, the Lane Community College TRiO program provides iPads to students in the tutoring services lab. The labs are designed to provide TRiO students with access to the iPads to assist them with various subjects, such as English, math, and computer science. Additionally, the TRiO students are using iPads to create simulations, and to

program, design, and develop interactive games (Lane Community College, 2016).

Several researchers, including (Ohrtman, Cronin, Torgerson, Thuen, & Colton, 2016) have noted that TRiO students tend to be considered more at-risk than the general student population because of their limited English proficiency, homelessness, and disabilities. In addition, these students are not only academically disengaged, but are disconnected from the college community, which may have a negative impact on their academic performance (Ohrtman et al., 2016). Since general college students have documented success with iPad usage, TRiO students can therefore potentially benefit from using iPads in the classroom (Diemer, Fernandez, & Streepey, 2012). For example, Diemer et al. (2012) stated that 85.1% of community college students described a preference for modest or widespread use of iPads in the classroom. Moreover, students conveyed high levels of learning and reasonable levels of outward engagement when using iPads in the classroom (Diemer et al., 2012). Therefore, the TRiO students' perceptions of iPad usage in the community college classroom are significant and can provide insight into how the TRiO at-risk population may become more engaged with iPad use. Also, iPad usage in the classroom can result in stronger academic performance as demonstrated through achieving course objectives. Consequently, this study can inform community college educators on how iPad usage may support TRiO community college students' learning experiences.

Chapter one is comprised of eleven sections and provides general information about the significance of the research topic: the background of the study, a statement of the problem, the importance of the study, the significance of the study, the nature of the of the study, the research questions, a discussion of the theoretical framework, the definitions, the assumptions, the expectations of the study, the study's scope, limitations, and delimitations. Finally, the chapter ends with a summary.

Background of the Study

Since the Apple Corporation introduced the iPad in 2010, community colleges have adopted this emerging technology and have predicted that iPads would eventually not only replace textbooks in classrooms but also lead to learners preferring iPads to traditional laptops and desktop computers (Carnevale & Rose, 2011; Goldrick-Rab, Harris, Kienzi & Mazzeo, 2009). In addition, the iPad can be an influential tool that can help transform learning at community colleges (Gentile, 2012). The iPad offers students individual and self-paced opportunities to explore areas of interest and meet their unique learning needs. Additionally, the teachers' use of the iPad in the classroom proves that the iPad provides more in-depth learning than any textbook, due to its various uses, such as note taking, focus group discussions, and collaborative work opportunities (Dailey, 2017).

Moreover, in 2010, Alabama encountered challenging times in higher education. When the employment rate decreased, community college enrollment followed suit. Matriculating students faced challenges as they needed to alter

several competing responsibilities. Many community college students enrolled part-time, as many were caring for family and dependents, and likely spending a significant amount of time commuting. However, other community college students needed to work while going to college. These challenges directly affected the time spent on academic activities. Therefore, such challenges directly affected their academic success.

This qualitative study has been valuable in establishing a baseline of practices and viewpoints that can inform how mobile technologies, such as the iPad, can enhance student learning in classrooms, as well as help with student engagement (Anderman & Patrick, 2012). Furthermore, this study has also identified the weaknesses and limitations of this new technology as they pertain to college competencies and how they sync with the Bill Rice Community College (BRCC) student environment (Anderman & Patrick, 2012). The immediate purpose of this study was to evaluate the students' perceptions of iPad usage in the classroom; however, this study uncovered some factors that may be important to research further.

In their study, Murray and Olcese (2011) stated that with iPads, students could receive access to a large quantity of material that ranges beyond their classroom due to the collection of unique applications researched. Murray and Olcese (2011) go on to explain how iPad applications also allow students to engage in group work, as these applications allow several users to share and create material concurrently, using either a Wi-Fi or peer-to-peer function. The

iPad also provides the opportunity for different users to work on the same document at the same time, such as Google Documents.

iPads can meet the needs of all learners, reinvent methods to learning and teamwork, help sustain and advance relationships between educators and students, and decrease long-standing impartiality and accessibility gaps (U.S. Department of Education, 2017). Community college TRiO students' perceptions of the iPad usage will help them achieve higher levels of performance. This information can help community college administrators make decisions about course development and equipment that can best support TRiO students in the classes. Therefore, iPads have been quickly adopted by community colleges.

History of TRiO

TRiO programs administered by the Student Services area of the Office of Postsecondary Education were designed to provide educational and college success services to students (Ohrtman et al., 2016). In addition, the goal of TRiO programs is to move these populations through the academic channels from middle school to post-baccalaureate programs (U.S. Department of Education, 2017). The evolution of TRiO programs was progressive after the introduction of the Economic Opportunity Act of 1964. The Economic Opportunity Act of 1964 was designed to fight the war on poverty through the formation of local Community Action Agencies (U.S. Department of Education, 2017).

In 1964, the Upward Bound Program was the first TRiO program that helped prepare students for college and offered them much needed support.

Additionally, the Upward Bound Program provided avenues for participants to thrive in their precollege performance and eventually, in their higher education quests (U.S. Department of Education, 2017). President Lyndon B. Johnson formed the Talent Search program of 1965 through the Higher Education Act. The Talent Search program classifies and supports individuals from unfortunate circumstances who have the likelihood to thrive in higher education.

In 1968, an addendum came to fruition, with the addition of Student Support Services (SSS) for disadvantaged students through a funding competition (U.S. Department of Education, 2017). The purpose of the SSS was to help students with modest college requirements, offer opportunities for educational development, grant funds to institutions of higher education, and guide students toward the achievement of their postsecondary education (U.S. Department of Education, 2017). All SSS projects are required to provide educational training in general education courses, such as English, biology, reading, and critical writing. The goal of the SSS is to increase college graduation and retention rates for at-risk students. Thus, the Higher Education Act of 1965 evolved into the TRiO program that encompasses all three components. Upward Bound, Talent Search, and Student Support Services are designed to advance better educational opportunity and achievement for students (U.S. Department of Education, 2017).

Since 1968, the TRiO programs have extended to involve many other areas. Presently, TRiO includes nine programs. Four years after the addendum in 1968, the Higher Education Amendment Act of 1972 included the

establishment of the Educational Opportunity Centers (EOC) that provide information and counseling on college admissions to capable adults seeking entrance to postsecondary education. In 1972, as part of the Upward Bound Program to serve returning Vietnam veterans, the Veterans Upward Bound (VUB) program was initiated. The distinct task of the VUB program was to help U.S. military veterans make the transition to postsecondary education. Moreover, the VUB program is designed to motivate and assist veterans in the development of academic and other mandatory skills that are critical for attainment and acceptance into a postsecondary education program (U.S. Department of Education, 2017). The Ronald E. McNair Post-Baccalaureate Achievement program, formed in 1986, affords grants to higher education institutions for plans intended to prepare participants for doctoral studies through participation in research and other academic activities. The Upward Bound Math/Science program was formed in 1990 to address the necessity for thorough instruction in the fields of math and science. In 2001, the Consolidated Appropriations Act was established to amend the SSS program and authorize the use of program funds for direct financial assistance (Grant Aid) for current SSS participants, who are recipients of the Federal Pell Grants (U.S. Department of Education, 2017).

Additionally, in 1976, TRiO included a training program for staff, TRIO project directors, and administrators. These training programs provide funding to enhance the skills and expertise of project directors and staff members employed

in the Federal TRiO Programs. Some training programs include conferences, seminars, internships, and workshops (U.S. Department of Education, 2017).

TRiO and IPad Usage

Many community colleges are beginning to use iPads in their TRiO programs to assist students in learning specific tasks, such as delivering and creating compelling presentations that will help incorporate documents that use images, videos, and even custom applications within presentations (Foresman, 2010). Community colleges play a vital role in teaching students technological skills, and the iPads will help TRiO students achieve course objectives in their computer classrooms (American Association of Community Colleges, 2016).

As of 2016, community college leaders have been under enormous pressure to increase student performance in achieving learning (Hollis, 2016a). Community colleges assist approximately half of all undergraduate students in the United States by offering open admission to post-secondary education and providing labor force improvements and service training (American Association of Community Colleges, 2016). Additionally, community colleges propose non-credit programs ranging from English as an additional language, to skills rehabilitation, and community enhancement curricula.

Such programs assist students in transferring to four-year institutions (American Association of Community Colleges, 2016). Without community colleges, hundreds of thousands of students would not have access to additional education or employment (American Association of Community Colleges, 2016). Furthermore, as a genuine facilitator for economic development, community

colleges are considered the entry point for education (American Association of Community Colleges, 2016).

In response to President Obama's education plan to increase the number of college graduates by 2020, mobile devices, such as the iPad is the primary invention of the Internet era in community college expansion through its three-phase 21st Century initiative (American Association of Community Colleges, 2016). Phase 1 of the 21st Century Initiative involve student success, voluntary framework of accountability, and strategies for dealing with budget constraints. Phase 2 of the 21st Century Initiative focused on implementing the recommendations identified in phase 1. Phase 3 deals with the colleges, partners, and approach to planning for comprehensive college renewal. Presently, these are the best practices used in community colleges (American Association of Community Colleges, 2016).

The American Association of Community Colleges (AACC) challenged community colleges to provide an additional five million students with degrees, certificates, or other credentials (American Association of Community Colleges, 2016). The 21st Century Commission also prepared effective procedures for community colleges to help guide them towards an optimistic future, one of which is the Three Rs. The Three Rs are Rearrange the Organization, Reinvent College Roles, and Reform Students' Learning Capabilities (American Association of Community Colleges, 2012). Members of the 21st Century Commission addressed these Three Rs. The recommendations included monies in support structures to assist various community colleges through a partnership

among institutions, and tactical targeting of public and remote funds. Moreover, the recommendations included the application of methods that stimulate objectivity, transparency, responsibility, and a 50% growth of community college students receiving college credentials by 2020 (American Association of Community Colleges, 2012).

Problem Statement

Community College students in the TRiO program report grades 29% lower than the general community college population (AACC, 2012). The TRiO program at an Alabama Community College is looking at technological advances, especially the use of iPads, to assist TRiO students based on the level of outcomes the TRiO students achieve. In general, all community college students across the U.S. reported a 51% improvement and therefore, the Alabama Community College System (ACCS) is trying to raise its students' grades by 10% in the TRiO programs (Redlich-Amirav & Higginbottom, 2014). In 2017, ACCS introduced iPads into the classroom in an attempt to close the gap between the TRiO students' and the general community college population's performance. Therefore, this study will examine TRiO community college's students' perceptions of their learning and achieving course objectives when using iPads in their computer classroom and TRiO lab.

The Significance of the Study

The findings of this study will be among the first to specifically address the contribution of iPads to community college TRiO students and their impact on the students' learning as demonstrated by the high level of outcomes the TRiO students achieve. The study offered some insight on the use of iPads in the

classroom so that policymakers, course developers, educational administrators, and teachers can consider using iPads in the classroom daily. The intent is to advance the students' competency through learning and demonstration of skills, such as creating, editing, and researching with the use of the iPad in the classroom. If colleges invest in providing the necessary tools to assist students with completing their assignments, this could result in students achieving course objectives. Also, being among the first studies to address the contribution of iPads to community college TRiO students, aspects of this study can potentially offer lessons to other colleges that are considering using iPads in the classroom. The findings of this study contributed to the body of knowledge in the field of iPad usage by community college of TRiO students, which has not been fully explored by researchers.

The purpose of this qualitative case study was to show how Community College TRiO students think iPads help in achieving course objectives. The community college alluded to in this study will henceforth be referred to as Bill Rice Community College (BRCC). This pseudonym was assigned to maintain confidentiality. When asking students in the TRiO program about their experiences using iPads at BRCC, this study produced a thorough and in-depth understanding of what role, if any, iPads have in assisting with learning that leads to completing course objectives. A case study design was chosen for this research.

As noted in Merriam (2009), the nature of the research problem and the questions posed are the reasons why a researcher chooses a case study design.

Merriam (2009) suggests that qualitative case studies work with other forms of qualitative research in the search for meaning and understanding. This research study consisted of interviewing ten TRiO student participants and one TRiO administrator, reviewing of the course syllabus, and a discussion with three teachers as data sources. All the elements were within the bounded system of Bill Rice Community College.

Additionally, in a qualitative case study, the researcher collects the data and conducts the analysis. The researcher uses an inductive investigative strategy, thereby resulting in a richly detailed product (Merriam, 2009). The material is not through one lens, but rather a variety of lenses, which then promotes the discovery and understanding of numerous aspects of the phenomenon (Baxter & Jack, 2008).

A qualitative case study approach is the appropriate study as it allows the researcher to conduct a thorough study of individuals, organizations, and occurrences, typically in a real-life setting, while allowing the researcher to comprehend different circumstances, often from a wide range of viewpoints (Lambert, 2012). In contrast, according to Lambert (2012), the case study method is recommended for exploring current reports when the evidence collected through discussions, reflections, brochures, artifacts, and appropriate actions are not obtainable. However, Dooley (2007) reported that a case study is like a richly detailed story that includes characters, the setting, problems, conflicts, and events. Similar to Dooley's work, this case study aims to relate the

story of using iPads to generate a first-hand education experience for the students (Dooley, 2007).

Nature of the Study

A qualitative case study research design guided this study. Qualitative research creates theories through the analysis of words and perceptions. The objectives and methods of qualitative research can seem vague for researchers familiar with quantitative methods, which aim to measure something, such as the percentage of people with a specific disease in a community or the number of households maintaining a net income (McCusker & Gunaydin, 2014). However, qualitative methods consider the attitudes and practices of patients, healthcare workers or the community. These methods aim to answer questions about the 'how,' 'why' and 'what' of a phenomenon rather than 'how much' or 'how many', which are answered by quantitative methods (McCusker & Gunaydin, 2014).

Moreover, qualitative methods are the proper choice if the aim is to understand how individuals or communities distinguish a specific issue. The researcher (and his/her integrity) may play a much more significant role than in quantitative research because of his/her character (McCusker & Gunaydin, 2014). Consequently, the researcher will need to understand the collected data. It is important for the researcher to safeguard the quality of the procedure for qualitative research; in contrast, the quality of the raw data will be more significant in quantitative research (McCusker & Gunaydin, 2014). Qualitative and quantitative inquiry have long argued the comparative value of the methods by researchers (Patton, 2002).

Qualitative research or phenomenological inquiry uses a realistic approach that seeks to understand phenomena in context-specific settings. Quantitative research or logical positivism uses quantitative procedures and investigational methods to test vague generalizations. The researcher's actions center on the fundamental assumptions of each paradigm and each denotes a profoundly different inquiry paradigm. Broadly defined, qualitative research generates results from non-statistical measures (Strauss & Corbin, 1990). Where quantitative researchers aim to summarize findings, causal determination, and expectations, qualitative researchers aim to understand and extrapolate parallel conditions. A different form of knowledge emerges from qualitative analysis compared to a quantitative review (Hoepfl, 1997).

Patton (2002) suggests that similar conditions are not complete characteristics of qualitative inquiry, but rather an outline for emerging detailed and robust data collection strategies that deliver a path. These characteristics are equally supporting (Lincoln & Guba, 1985) and considered consistent in qualitative studies (Patton, 2002). It is important to note the developing nature of the qualitative research strategy. It is not advised to conclude research strategies before data are gathered as the researcher pursues to observe and translate meanings in context (Patton, 2002). However, qualitative research should explain the data collection tactics and indicate the main questions investigated. The specific strategy of a qualitative study varies on what information will be most beneficial, what information will have the utmost reliability, and the purpose of the analysis. For sample size, there are no firm

measures (Patton, 2002). There is no statistical examination of significance to

conclude the results count, and frequently qualitative studies take on numerous

forms of proof (Eisner, 1991). Thus, the researcher and the reader are left to

judge the trustworthiness and practicality (Hoepfl, 1997).

Winter (2000) suggested that qualitative researchers have come to

support their participation and position inside the research, while quantitative

researchers withdraw themselves from the research procedure. Nonetheless,

mutually quantitative and qualitative researchers need to test and validate that

their studies are reliable (Golafshani, 2003). The disagreement for the

assistance and effectiveness of qualitative research rests in part on the

acknowledgment that relations amongst individuals within colleges and

classrooms are cultural (Schafer, 1998). Qualitative research includes the

associations people have to themselves (their conceptual understanding); to

substances, and to one another (anthropological and sociological perspectives);

to the items they produce (the constructed environment); and the structures, and

their exact culture, the natural atmosphere that incorporates culture (Schafer,

1998). One cannot prepare to gain knowledge and understanding without

recognizing the role that culture plays in facilitating our daily activities since

activities involve both constructing meaning and retrieving knowledge (Stokes,

1997). The community's respective cultural backgrounds construct meaning and

the cultural histories that occur around various community activities (Golafshani,

2003).

A qualitative research design accomplished the researcher's goals of this study by helping the researcher understand the nature of the computer classrooms as prepared environments for gaining knowledge (Erickson & Gutiérrez, 2002; Morningstar, Shogren, Lee, & Born, 2015; Shogren, et al., 2015). To better recognize what approaches work better for some students and not others, the qualitative method results can assist in the students learning different skills with the iPad (Erickson, 2011). One may also be capable of comprehending how the design of curriculum and the task of the teacher mold some students' access to knowledge and discovery while restraining others (Golafshani, 2003). Qualitative methods are unlike quantitative methods such as surveys because they allow for discoveries in an instant (Golafshani, 2003).

Research Questions

The case study research is essential because it may give clarifications for how some at-risk students engage in classroom activities with the assistance of the iPad. The iPad selection for assisting with the daily activities in classrooms that frequently go unexamined will help students achieve course objectives (Kozleski, Artiles, McCray, & Lacy, 2014). Essentially, case studies offer participants the chance to highlight concerns that are significant but may not have happened to researchers who are not typically rooted in the social spaces of students and teachers, and places research applicants in the part of a storyteller (Golafshani, 2003).

As a result of using a qualitative case study to examine the experiences of a small group of TRiO students at BRCC who were asked about achieving course objectives after iPad use, this study addressed the following questions:

1. How did classroom experiences with iPads affect students' achievement as demonstrated through achieving course objectives?

    a. In what ways are iPads used in the classroom?

    b. What are the perceptions of students, administrators, and teachers on the inclusion of iPads in learning practices?

Theoretical Framework

Maehr and Nicholls (1980) and Nicholls (1984) defined Achievement Goal Theory as the objectives that demonstrate or improve competence. For example, Nicholls (1984) stated that the distinctive perception of competence or achieving competence is demonstrated in the classroom and is necessary for content or information attainment. In addition, Meece, Anderman, and Anderman (2006) defined Achievement Goal Theory as a focus on students' explanations or objectives for selecting, engaging, and continuing the learning task with different learning activities.

For this study, Achievement Goal Theory is the framework for understanding the principles used to measure success and for explaining why we participate in achievement-related behavior (Ames, 1992a; Dweck & Leggett, 1988; Nicholls, 1984). In addition, Dweck (1986) defined Achievement Goal Theory as the type of objectives that shape how students approach and react to their school work. Achievement Goal Theory has a significant bearing on the

effect, activities, and perceptions that students experience. This study was framed using Achievement Goal Theory discussed by sixteen researchers.

Ames (1992a) projected that students pursuing performance goals selected easier tasks for learning, participated in familiar performance patterns following disappointments or difficulty, and assumed apparent learning strategies in the classroom. Additionally, Ames (1992a) defined classroom structures in relation to how they create achievement goals for students through assessment practices, classroom authority, and the variety of assignments. For example, assessment practices that frequently link or track students by level of skill reinforce performance goals. Specifically, as students transition from one educational setting to another, such as the transition from high school to college, TRiO students will have to adjust to a new way of learning. Several researchers have studied how apparent classroom goal structures alter the level of learning (Midgley, 2002).

Classroom research establishes a link between performance, student effort, and student achievement goals. Elliot, McGregor and Gable (1999), for example, found that college students' learning and performance-approach goals were helpful predictors of competencies, exam performance, and effort. However, these research findings have been based on either the traditional achievement goals model or traditional classroom settings. Thus, Achievement Goal Theory is useful for examining student classroom learning in which different instructional strategies, such as the iPad, are used (Kaplan, Middleton, Urdan, & Midgley, 2002b).

Furthermore, Montrieux, Vanderlinde, Scherllens, and De Marez (2015) stated that iPads are being used to provide interactive, media-rich and exciting new learning environment modifications that are viable to students' learning in the classroom. In addition, Achievement Goal Theory is helpful in analyzing students' performance that leads to achieving course objectives when training students on how to create, research, and collaborate in the classroom by using iPads (Meece et al., 2006). As a result, policymakers have begun to explore the iPad's usefulness in offering technical and pedagogical support to teachers and students, and how they accept or react to this kind of technology in education (Meece et al., 2006).

Definitions

Application-Based Technology Platforms: Software such as database management software, operating systems software, and software in the open cloud (Chappell, 2011).

Classroom Technology: The technology in the class that provides students and users with a wide range of potential activities and learning styles to become more efficient. With the use of classroom technology, students develop important skills for their future (Moeller & Reitzes, 2011).

Digital Immigrant: A person born before the implementation of digital technology (Prensky, 2011).

Digital Native: A person born in a period in which a specific technology was introduced. In this Achievement Goal Theory study, the term refers to an individual born in the 20th century when much technology was introduced, and

who has a good understanding of the concepts of digital technologies and can easily interact with the technology (Prensky, 2011).

IPad: A device that takes photos, shoots videos, plays games, plays music, and allows web-browsing and e-mailing. It is also referred to as "a slate" and is an example of a tablet computer (Alsufi, 2014).

Assumptions

Instructors should create an environment where students can succeed and form a culture for learning technology. To promote student engagement and report on the achievement gap, use of digital media with the iPad can be an influential tool. Application-based technology platforms provide students with access to literacy instruction in a positive, supportive and effective way (Chappell, 2011). The Application-based technology support runs on all types of computers, including iPads, desktops, on-premises servers, mobile phones, and servers in the open cloud (Chappell, 2011). For the right set of services, an operational application-based technology platform is needed.

Furthermore, an application platform can assist different kinds of applications because the applications could be used individually. For example, an application that runs in the cloud and supports thousands of instantaneous users will need various services for implementation and storage compared to a single-user application running on a phone. The assumptions are that students answer truthfully, students use application-based technology on the iPad, students are honest about their grades, and administrators and teachers answer honestly.

The Scope of the Study

In this Qualitative Study, the researcher interviewed a purposely selected sample of full-time students from a public community college in Alabama. Participants were TRiO students enrolled in a computer course at the college. An administrator and three teachers were also interviewed.

Delimitations

The findings from this Qualitative Study were not generalized to a larger population of TRiO students, administrators, or teachers. The researcher chose a qualitative method, which minimized generalizability. The study of only TRiO students at a two-year institution with an enrollment of 764 students, as opposed to a four-year institution with an enrollment of 12,000 students, may not allow the results to be adequately widespread to a higher population of TRiO students, administrators, and teachers.

Limitations

The study focused on the perceptions and attitudes of TRiO students toward the use of iPads in the classroom as it relates to their performance that leads to achieving course objectives. Factors that may affect the limitations of this study include the following:

1. New concepts

2. Voluntary sample

3. The small scale of the sample

4. Time constraints

This qualitative study only examined TRiO students' interpretation and implementation of iPad use in the classroom. Further research was limited by constraints of an academic term and the availability of the administrator and teachers to schedule interviews.

The data collection used in this Qualitative study consisted of observations and interviews. Interviews are in-depth techniques intended to question people about themselves, their outlooks and performances (Creswell, 2014). These types of measurements can cause unreliable answers because respondents may over-report or under-report for a variety of reasons. Some of these reasons include feeling uncomfortable in stating their true reactions or merely forgetting the accurate account of their experiences.

Summary

The Center for Digital Education (2004) reported that the expansion of technology has touched most students and transformed the way American colleges function. Technology, such as iPads, continues to alter the general settings and teachings established in classrooms. Whether it is "Skyping" with friends thousands of miles away, checking scores or tasks that are accessible at will, or using the iPad for research or collaboration, the iPad is a fast-growing tool in the classroom (Center for Digital Education, 2004). Therefore, such as is the case with iPads, the value of technology in the classroom is essential for all educators to know.

To validate its presence, iPads in the classroom should have a favorable influence, including the facilitation of efficient group work within the classroom

(Geist, 2011). The use of time management applications, such as calendars,

reminders, notes, and emails, will also enable students to be more competent

and prolific in the classroom (Alyahya & Gall, 2012). The results of this study

created a deeper understanding of iPad use among the study participants in the

classroom. This study linked the experiences of students who used iPads in the

classroom at the BRCC TRiO program with the TRiO students who only used the

iPads in the TRiO labs while attending the same community college.

Chapter 2: Literature Review

Introduction

This study examined the perceptions and recalled experiences of TRiO students at community colleges regarding iPad use in the classroom. It is essential to examine the level of achievement of these community college students. In America's classrooms, technology, such as the iPad, may be one of the solutions for raising the number of engaged students in the country (Wardlow, 2014). When technology, such as the iPad, is integrated into the classroom, students' engagement, regardless of participation and proficiency, increases (Wardlow, 2014).

In their study, Lindbeck and Fodrey (2011) indicated that educational tools would be labeled as the best form of instructional technology training as innovative technologies become progressively prevalent, and a need is seen to integrate these tools into the curriculum. Consequently, technology, such as the iPad, can directly affect the success of student training and can take many forms when the mixture and incorporation of these technologies is provided in the college classroom. Like most other facets of education, the iPad is subject to a variety of changing aspects in the classroom that influence the level of success for students. The changing aspects in the classroom include curricular restrictions, academic policies, adult learning philosophies, individual, official, and social obstacles (Lindbeck & Fodrey, 2011).

This review of literature begins with a history of technology development and later describes the technology in the classroom. Furthermore, a discussion

on iPads and community college faculty resistance in using iPads in educational settings and others were presented. Additionally, information was given regarding several significant writers and researchers who have discussed iPads, followed by a discussion and description of acceptable college use policies, teacher training, and lack of resources. It is important to note that community colleges in this context disproportionately use adjunct teachers who may or may not be available for training (Hollis, 2015). The literature review will also address technology challenges in the classroom and why these technical challenges are relevant to students. Also, there will be a discussion on the advantages and disadvantages of iPads, as well as how the topic of this study contributes to the current body of knowledge research.

History of Technology Development

Educational technology has been established and developed exponentially over the past few years. Society has produced an excessive amount of technology, extending from overhead projectors to iPads. However, society must first look back at the start of technology. Society originally started with the writing slate and now uses computer tablets and smartphones daily. This type of technology in society goes back as far as 1926, when Sidney Pressey established a mechanical teaching device that allowed students to input answers to questions, comparable to current computers (Beins, 2001). Since the late 1970s, there has been rapid development in the use of computers within education (Hermes, 2009).

For instance, computers were generally used for secretarial tasks and administrative purposes in colleges (Schifter, 2008). During this time, computers increased organizational productivity in many areas including printing and processing, taking inventory, monitoring library usage, storing student and teacher records, performing accounting tasks, and creating student schedules. Colleges could preserve and produce student reports and financial accounts. Additionally, computers helped increase organizational productivity and accuracy. With the use of a computer, instructors saved energy and time and could calculate student grades more quickly, compared to earlier approaches of scoring and grading. Also, educators could generate and store modified student records with details about students' prerequisites, social development and academic progress (Grundmeyer, 2012).

Educators began using computers for instructional purposes in the 1980s, including preparing tests, worksheets, reports, and lesson plans. Therefore, to revamp teaching and to assist with learning in the classroom, computers boosted teachers' productivity, their ability to evaluate data and their ability to be accurate (Murdock, 2004). Additionally, computers are now being used for a range of purposes as educators have expanded their use of computers in the classroom. Numerous educators use computers to Skype with other classes, blog, utilize Web 2.0 tools, participate in online learning networks, and use online textbooks daily. In education, the use of computers has dramatically increased and is only limited by hardware that varies among colleges, by a lack of time, and a lack of

funds for training (Grundmeyer, 2012). Computer usage in colleges has indisputably grown since 1987.

In 1981, the fraction of American colleges with at least one computer accelerated from 18% to 95% in 1987 (Hermes, 2009). In 1983, universities used computers 75% for instruction, and colleges used computers 40% for instruction (Murdock, 2004). Also, many colleges had computers by 1985 (Murdock, 2004), In 1995, there were 5.8 million computers in U.S. colleges (Schifter, 2008), all (100%) of American colleges had access to the internet in 2003 (Schifter, 2008), and presently, there is a computer in nearly every teacher's classroom in the nation (Hermes, 2009). Several colleges are finding ways to integrate computers into the classroom and the curriculum.

Some college curriculums now guarantee that students have computer familiarity in many formats and in many subjects, ranging from Internet-based research projects to games that teach multiplication tables (Murdock, 2004). There are different arguments on the development of computers; however, the consensus is between the late 1970s and the early 1990s. The year 1977 marked the introduction of microcomputers to the market as personal computers. It allowed people, although only the well-off, to own computers for personal use. As microprocessors developed, the price of computers went down, and more people started to obtain them. Although more people could afford to have them in their homes then, they were still confronted with the challenge of allocation information, which eventually led to the expansion of computer networks (Davis, Bagozzi, & Warshaw, 1989). A computer network is a system in which

computers are linked to share data. However, at the time, the earlier networks could only share data within a physical wall.

As the need for sharing information increased, distance also became a challenge (Demeulle, Lowther, & Morrison, 1998). Sharing information gave rise to extended networks beyond a physical wall, thus generating the requirement for speed as well. Internet technology developed progressively to accommodate both distance and speed, as more and more people started to own computers. This development expanded the sharing of data among people and made computer networks the core of modern communication (Davis et al., 1989). Computer networks are classified as wired or wireless.

For instance, a wired network is a network in which computers are amalgamated together by a wire. On the other hand, wireless networks, such as Wi-Fi, allow iPads and handheld devices to share information without the need to connect physically to each other (Pahlavan & Krishnamarty, 2002). These technologies are apparent and will need addressing thoroughly in all community colleges.

Technology and its evolution can influence students' training on computers in the classroom. Additionally, educators can develop new techniques with these changes that will assist students (Klopfer, Osterwell, Groff, & Hass, 2009). Technology also denotes the way teaching is provided by presenting educators with current methods to influence all kinds of learners and measure student understanding through a broader selection of choices. Furthermore, technology can alter the association between instructor and

student. Knott, Steube, & Yang (2013) suggested that the role of technology in the classroom has increased over time and will remain a staple in classrooms of the future. Nevertheless, Hollis (2016) stated that students, particularly those in open access environments and who identify as nontraditional, need the support of the teachers with tech-savvy learning systems. The iPad is among the innovative technology tools that will assist in the information and communication learning systems for students.

According to Bradford (2011), the area of information and communications technology has evolved significantly, as technology is altering the standards of higher education with its progress throughout the nation. Educators are being pressured by their administrators to deliver instructional content and teaching methods that keep the pace with current technical and practical advancements. However, faculty, whether on campus or at a distance, must become accustomed to employing technology efficiently to provide content for students, specifically in higher-educational institutions (Lambert, 2012). Dyer (2013) noted that students are incorporating the use of their mobile devices in their schoolwork because the devices are easy to carry, and they are comfortable using them. One of the reasons students are comfortable using newer technology is that they have been surrounded by technology from an early age (Dyer, 2013). Regarding the integration of iPads in the classroom, it seems that flexibility and ubiquity remain encouraging aspects for students (Dyer, 2013).

In their study, Hendricks, Wickersham, and Lumadue (2012) suggested that an experimental study containing iPad integration in a freshman course at

Texas A&M University-Commerce resulted in many conclusions about student

tablet use. Results specified that students chose using technology in the

classroom as opposed to not. Therefore, "it is incumbent upon colleges and

universities to provide students with tech gadgets to foster and challenge their

learning" (Hendricks et al., 2012, p. 15) to increase the digital revolution.

According to Diemer, Fernandez, and Streepey (2012), students who revealed

an extraordinary level of knowledge using iPads also conveyed an excellent level

of engagement. No factors due to gender, language, or age were found.

Students who were content with different styles of e-learning showed a

considerably higher level of learning and engagement (Diemer et al., 2012).

Students who described themselves as being at ease when using iPads were

more likely to use iPads for educational and professional growth. Additionally,

some students who expressed an interest in continuing to use iPads initially

labeled themselves as slightly uncomfortable with e-learning technology (Diemer

et al., 2012).

Discussion on iPads

The iPad's potential for use in the educational system first came out as

early as 2010, when an article was written in *The Journal* concerning iPads

(Alsufi, 2014). McCrea (2010) cited an instructor in Tennessee as saying that the

iPad could be expensive, with the cost being over $800 per iPad. He also noted

that there is no difference between an $800 iPad with no Internet access and the

$150 notebooks that were currently in use. However, the iPad bears potential as

a growth and news-spreading platform (McCrea, 2010) and is a seamless

platform for educational applications with its software development kit (Alsufi, 2014).

In their study, Diemer et al. (2012) noted that active and collaborative learning using mobile devices, such as the iPad, has the potential for student engagement. If the iPad successfully raises the level of student engagement and effective learning outcomes, then educators can expect to increase the use of iPads within college classrooms (Diemer et al., 2012). Also, students reported increased engagement (active and collaborative learning), and extended use of the iPad in the classroom varied throughout disciplines (Diemer et al., 2012). Diemer et al's (2012) study was quantitative, and as such did not yield profound perceptions from students with regards to the use of technology. Additionally, the study was conducted in a four-year college. However, this study explored iPad usage in depth with students from a community college. Several other researchers addressed the iPad usage in the classroom.

For example, Berg (2013) noted the popularity of the iPad as a portable device in the classroom, at home, in college, or during travel. In the classroom, the iPad can be used as a whiteboard, creating a collaborative class setting, and can be connected to any monitor or projector with ease (Berg, 2013). Also, Rola (2002) suggested that many colleges, which implement mobile-learning initiatives, require students to have iPads for educational purposes. These initiatives are motivated by employer demands, which require graduates to have solid proficiencies and knowledge of technology, such as the iPad (Rola, 2002).

The use of iPad gives students the capability to learn anytime and anywhere without having to sit in a laboratory or in front of a computer (Brand & Kinash, 2010). The iPad has most of the capabilities of a desktop and laptop, and has unlimited uses in portable learning because of its unique features, including an assortment of applications and touchscreens. Teachers have noted the use of iPads as a teaching device when the iPad found its way into the classroom in the hands of students. The migration to digital text, which can involve diverse skills and tactics, is one of the challenges that teachers must deal with in the classroom (Coiro, Knobel, Lankshear, & Leu, 2008).

Technology, such as the iPad, can transform education. However, the iPad may prove to raise the competitive action when the rate of advancement in technology outpaces administrators; nonetheless, it is easy to conceptualize (Coiro et al., 2008). According to Mark Gentile, CEO and president of Odyssey Software, the iPad creates exciting educational openings, and carries a set of complications for IT managers, such as content transfer and security (Gentile, 2012). In February 2013, Apple Corporation sold 4.5 million iPads to U.S. based education institutions. The challenge for colleges became vast when Apple built tablets associated with other versions used by students in the classroom. The incorporation of digital technology, such as the iPad, into the curriculum offers students many learning opportunities, and it is essential that instructors recognize this development.

If all educators want to incorporate iPads into the curriculum, they must do so if they want students to meet upcoming challenges (Alsufi, 2014). Students

who use devices such as iPads and Information Computer Technology (ICT) in college can support the expansion and learning of their skills in the classroom. As such, students can identify as individuals. Note-taking by hand improves retention and comprehension. However, with an iPad, students can take notes by hand with the electronic pen (Mueller, 2014). Teamwork is enhanced when students share the information amongst themselves, and when everybody contributes. Leadership is a form of tacit knowledge because not every student has leadership characteristics, but every team requires a leader to explain their work. However, teachers can assist as leaders if they are comfortable with the iPad (Alsufi, 2014).

Technological devices, such as iPads, offer students access to resources they can obtain worldwide. With the freedom to access numerous resources on their own, students do not need to rely on the teacher as the sole source of information. In this way, each student can develop individual knowledge through different resources, lending to individuality in their work. Using the iPad for learning other technologies also makes students accountable for obtaining the essential skills for achieving course objectives (Alsufi, 2014). When bridging the digital gap between teachers and students, the use of the iPad helps (Demeulle et al., 1998).

Teachers must obtain computer skills to be able to teach using the iPad. The digital gap between teachers and students decreases when teachers gain the required skills. iPads provide teachers with more flexibility in teaching. For example, teachers can construct outlines so that students can write notes

throughout the class and distribute them to other students online. Teachers can also create tests online. Additionally, teachers can collect students' homework ahead of time if desired; students will no longer have to carry books, and the inconvenience of forgetting books at home will diminish. Information can also be arranged in numerous ways using the aid of an iPad, which can help make it simpler for the student (Berg, 2013).

In their study, Devasagayam, Stark, and Watroba (2013) noted that iPads could expedite note taking. Their findings indicate that iPads are used to cultivate a more collaborative educational setting and increase data collection during class time. Furthermore, their findings indicated that classroom discussions were enriched with the use of iPads (Devasagayam et al., 2013). Students alleged that the essential variable for efficiently integrating iPads in the classroom is the teaching style of the instructor. In accordance with 90% of the respondents, the instructor's teaching style can make or break the use of iPads (Devasagayam et al., 2013).

Annan-Coultas (2012) noted that students reported using iPads to access course files in the learning management system for communicating, for off-task purposes, and for looking up course concepts. Students mentioned that they frequently used e-mail to correspond with the university community regarding academic-related matters. Students also used video conferencing or instant messaging as part of their class assignments to complete their projects together. Other uses include finishing tests online, submitting assignments, and accessing class recordings, enabling group work, conducting research, and generating

presentations (Annan-Coultas, 2012). However, the issue is that some teachers in numerous institutions are resisting learning about and using technology. Also, teachers insist the technology, such as the iPad, could be disruptive (Khalil, 2013).

Therefore, university professors who consider iPads to be more of a disturbance than an educational device have been hesitant to implement computers in their teaching methods. However, computers have been valued as a study device in higher education since the dawn of the Internet in 1995, and are now in classrooms at various colleges across the country. In addition, the accessibility of computers has extended in higher education since the needs of students have increased (Grundmeyer, 2012). Furthermore, higher education institutions have also transformed their libraries to meet the technology requests of students. In the past, students could only locate books at libraries. Libraries provide students with books, computers, online databases, research journals, magazines, and search engines to help students with their research (Grundmeyer, 2012). Alabama students have accessed library material through the Alabama Virtual Library (AVL) for a couple of decades.

An Overview of the new 9.7-inch iPad

Developed and marketed by Apple Inc., the iPad, a line of tablet computers, was designed primarily as a platform for multimedia, including books, periodicals, music, games, web content, and movies. The latest Apple iPad – the 9.7 Model with Wi-Fi – was engineered for performance. The dimensions of the Apple iPad Wi-Fi 9.7 are as follows:

Height: 9.4 inches

Width: 6.6 inches

Depth: 0.29

Weight: 16.8 ounces

The Apple iPad 9.7 has an immersive multi-touch retina display with the power and ability expected of a computer. The features of the Apple iPad 9.7 are as follows:

Embedded Mobile Broadband—4G LTE

Headphone Jack

Operating Systems Compatibility——Apple iOS

Charging Interface(s)—Lightning

Battery Type—Lithium-polymer

Software—Photos, FaceTime, Mail, Music, Safari, Maps, Siri, iTunes Store, App Store, Notes, iBook's, Home, Reminders, Clock, TV, News, Photo Booth Podcasts, Find My iPhone, Find My Friends, Files, Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, and Clips (The Apple Corporation, 2018); and

Additional Accessories—Lightning to USB cable and USB power adapter

The above features of the new iPad are beneficial for students as it allows them to learn and create projects that will support their educational goals and achievements.

Teacher Resistance

Moerschell (2009) noted that college teachers had numerous reasons for resisting learning new technology for the classroom:

1. Limited vision of the future

2. Comfort with the way things are

3. Deficits in information and communication

4. The individual's nature to be uncooperative

5. A lack of skills

Moerschell (2009) also noted that the ideology of learning new skills in academia is a severe issue in the resistance to technology that "epitomizes this behavior" and is "a necessary systemic component of implementing technological change" (para. 22). In their respective studies, Oreg (2006) and Horn (2002) added that instructors resist change since it conflicts with their outlooks and their plans in the classroom for acquiring knowledge of technology. Instructors also experience increased concerns and distress in implementing iPads. Also, Oreg (2006) stated that resistance to change decreases when personnel have trust in their administration. However, the findings of Khalil's (2013) study suggested that the most significant reasons for resistance to change were staff members' sense of independence, incentives (such as intrinsic motivation), and trust in the organization.

Resistance was mentioned in other studies: Roberts (2008) contended that educators stay resistant to integrating new educational technologies into teaching despite the ubiquity of technology in everyday life. Roberts (2008)

offered an outline to help professors overcome this resistance. The outline gave professors information on how to support the actual application and integration of technology within the academic setting. Also, the outline detailed the most appropriate technology to support instructors' educational objectives. In addition, a calculated development procedure intended to assist administrations in aligning actions with their vision and mission allows educators to support their educational goals through technology. Roberts (2008) developed the following four-step method for students to reach their goals:

1. Planned investigation

2. Policy creation

3. Strategic proposal design

4. Execution of the plan

Moreover, the four-step method empowers educators to expedite policymaking and adoption linked to educational technology that works within their system. The plan also helps to overcome central challenges to technology acceptance, such as teacher resistance, organizational values, and resource insufficiency (Roberts, 2008). However, Handler (2012) stated that educators need to comprehend the influence that specific technologies can have on certain groups' education and shared growth. Educators must attain knowledge about technologies, such as iPad and other devices, before presenting them to the classroom (Handler, 2012). In a quest to implement iPads, four researchers discuss resistance of this technology in the classroom:

Khalil (2013) suggested that there remain a significant number of teachers who struggle with using technology, such as the iPad, for educational purposes and in communication, training, and research at numerous colleges and universities. Therefore, resistance to using the iPad is still prevalent in many community colleges (Khalil, 2013). Moreover, Moerschell (2009) presented differing attitudes concerning technology, such as the iPad, from "the old-timers who like things as they are" (para. 8–9) to the benefits of technology from the new generation of students that like change. (Moerschell (2009) also noted several explanations for resistance:

1. Visualization of the future as inadequate

2. The method being used as pleasing

3. What the leader recommends for the teacher

Although there are several explanations for resistance, Banister (2010) reported that researchers should record the effect while instructors should assume the task of incorporating the iPad into their classrooms and not resist the usage of the iPad. Teachers could use a method called flipping the classroom. One of the flipping the classroom models is when students are issued the homework of reading materials and viewing video lectures significant to the next day's class. In class, with their teachers available for additional one-on-one time and engagement activities, students may practice what they have learned through traditional schoolwork (Panopto. 2017). According to Devasagayam, Stark, and Watroba (2013), new technological advances are becoming integrated into college students' fast-paced life. For instance, "technologies such as the cell

phone have quickly evolved from a portable telephone device to an all-in-one e-mailing, text messaging, personal organizing digital device" (Devasagayam et al., 2013, p. 15). Technologies such as iPads have yet to be introduced to every college classroom across the country despite the full range of services already available, such as high-speed Wi-Fi internet capabilities and advanced multi-purpose laptop computers (Devasagayam et al., 2013). In many classrooms, there is resistance to these technologies. However, technology resistance overlaps in other areas. The technology areas include cell phones and smartphones and may enhance learning through smart-technology classrooms for students where iPads are available (Handler, 2012).

Views of Significant Writers

In education, where students have valuable authentic experiences in technology that can improve their learning, educators have looked to emerging technologies to bring about a transformation. The Horizon Report is a report to chart emerging technologies for teaching and learning. The report objective is to help educators shape innovation in their institutions (Johnson, Adams-Becker, Estrada, & Freeman, 2014. In the Horizon Report, intuitive technologies have been recognized as a tool (Johnson et al., 2014) likely to have a significant influence on learning in colleges. In much of the world, tablet computing has become a part of our everyday lives (Johnson, Adams and Cummins, 2012) without much disagreement regarding its educational value (Clark & Luckin, 2013). Some characteristics of the iPad that have led to the approval of their use in colleges include portability, ease of use, inexpensive hardware and software,

the touchscreen feature, and extended battery life. iPads support students in gaining ownership of their learning (Willocks & Redmond, 2014), with a rising development toward the personalization of teaching (Johnson et al., 2012) and improved flexibility and access for educators.

For example, in-depth discussions were conducted with technology educators to reveal their observations of continuing professional development that had influenced their learning at the University of Nottingham. Additionally, the in-depth interviews were conducted to analyze the students' views and gain knowledge as to how their professional development influenced their learning in practice (Anderson, 2010). The results of this study gave a deeper understanding of iPad use among the study participants in the classroom.

In the Chronicle of Higher Education, Li (2010) stated that at Williston State College in North Dakota, the administration gave iPads to their entire faculty in hopes of keeping them informed and wanting them to have the opportunity to work with technology. Lindroth, Lundin, and Svensson (2013) suggested that the use of the iPad and other networked technologies is common at many community colleges. Several other researchers expressed their views concerning iPad usage in the classroom.

Waters (2010) noted that Apple's iPad was the first tablet from a new group of devices, and stated that these devices would continually transform and expand in the upcoming years. In addition, Mathis (2010) noted there were early developments of colleges integrating iPads into their institutes for use to improve their students' learning abilities.

According to Wieder (2011), iPads also cultivate partnerships. For example, at Pepperdine University, students who used iPads for group projects in a math class collaborated better than students who did not use iPads. With the iPad, students can work at faster speeds and can share their monitors to assist one another in answering tough problems (Wieder, 2011). Conversely, laptop displays can be distracting. Recent studies have discovered the effects iPads have on students (Goodwin, 2012; Hendricks et al., 2012; Li & Pow, 2011), and found links between institutes, thinking skills, and enthusiasm levels, and laptop use in "one teacher, one student" placement curricula (Goodwin, 2012; Li & Pow, 2011).

Rather than diverting from the methods of education and joint evolution, Handler (2012) suggested that educators pursue an enhanced appreciation of how iPads can improve the classroom (Handler, 2012). In a study of 18 teachers, Ifenthaler and Schweinbenz (2013) determined that most of the teachers thought iPads did not enrich learning and that the teachers had different sentiments on iPad practice in education. They also highlighted that most teachers require technical support when it comes to using iPads.

The Pamuk, Çakır, Ergun, Yılmaz, and Ayas (2013) study, in the experimental stage of the FATIH project presented a few technical issues. The issues were that teachers and students were scarcely using the iPads, e-contents and e-books were unqualified, and teachers needed instructive and professional support. There was a need for professional training, and there were technical restrictions in the classroom. In a distance-learning program, another

study established that the flexibility of the teaching procedure, in relation to time and location, increased when students were provided with iPads (Aydemir, Küçük, & Karaman, 2012). Analyses have been conducted on lessons instructed with iPads, and these have examined the advantages of iPad use in the classroom, the assessment of computer-based lessons, and the effects of iPads on the learning method (Anderson, Anderson, Wolfman, Vandegrift, & Wasuhara, 2004; Derting & Cox, 2008; Koile & Singer, 2006; Olivier, 2005; Rawat, Elahi, & Massiha, 2008; Yoon & Sneddon, 2011).

Students who do not know how to use the iPad accurately, despite the iPad being an intuitive tool, have not taken the time to learn how to use it properly (Kennedy, Judd, Churchward, Gray, & Krause, 2008; Lam, Lee, Chan, & McNaught, 2011). In addition, Liu, Han, and Li (2010) noted that possession of iPads would not automatically mean that the devices would guarantee informal and proper learning. However, the implementation of iPads in the classroom has afforded direct access to resources, several educational applications, which can improve student learning and increase communication regarding the iPad (Alyahya & Gall, 2012; Barnes & Herring, 2011). Technology, such as the iPad, was not always considered an educational tool, and has been known to produce some challenges. Therefore, it is important to understand that initially, it was not accepted in colleges. The way teachers implement and incorporate these technologies into their teaching will resolve their impression of learning, but using the technology alone will not improve student success (Livingstone, 2012). Current pedagogical attempts will need adjusting with the use of new

technologies, such as the iPad, in the classroom. By merging learning with modern technologies, student-centered pedagogies can afford new opportunities for learning (Goodwin, 2012; Shuler, Levine & Ree, 2012). As Murray and Olcese (2011) reported, when students and teachers accomplish what they may not otherwise have been capable in their learning and teaching, the significance of a tool such as the iPad becomes evident.

A study by Bayliss, Clipson, and Wilson (2013) examined the college student population and attained parallel results on this topic. The researchers in the study examined the differences in learning between printed text and iPads, as well as iPad usability in a classroom setting. The results showed that college students found iPads to be more user-friendly compared to the written text, corresponding with previous literature concerning the attitudes of iPad usage in the educational system. In addition, there was no influence of text presentation on reading comprehension among this population (Bayliss et al., 2013). Another parallel study conducted by Margolin, Driscoll, Toland, and Kegler (2013) observed the difference between text that tells a story which is a narrative and text that offers material and information which is expository. Undergraduate students in this experiment were broken into the following three separate test platform groups: a computer group, an iPad group, and a printed text group. The subjects were tested for reading comprehension on an array of standardized reading passages involving both narrative and expository texts, which were overseen by the researchers. The research results confirmed parallel outcomes to the Dundar & Akcayir (2011) study, wherein reading comprehension across

testing platforms showed a substantial difference (Margolin et al., 2013). As far as a learning method at any level of education, these results further established that iPads do not have a disadvantageous effect on promoting knowledge.

Technology Policies

In technology classrooms where iPads are being used, the teachers should identify clear guidelines for students in the course syllabus (Bayliss et al., 2013). However, some teachers have diverse perspectives and presumptions concerning personal technology in the classroom (Bayliss et al., 2013). Therefore, Bayliss et al. (2013) recommended several technology policies for exclusion or inclusion, which are linked to the iPad that could be outlined in a class syllabus. They are as follows:

1. The use of iPads, smartphones/cell phones, and computers in the classroom will not be applied without prior discussion with the instructor.

2. When students have specific technology, such as the iPad, accessible in the classroom, it should be adequately implemented.

3. The use of the iPad for networking on sites such as Twitter or Facebook is not an appropriate in-class tool.

4. Receiving or sending e-mails, playing videos that are not educational, and watching games in a class can cause disruptions to the instructor and fellow students in the classroom.

5. iPads, computers, and other electronic devices in the classroom are used for class assignments only.

Faculty Training

In community colleges where adaptations are particularly effective, faculty training in an educational setting plays an important part in the implementation of technology-supported education. Community college leaders take definitive approaches to cultivate this advancement of technology (Hew & Brush, 2007). Leadership influences educational technology incorporation in colleges (Fox & Henri, 2005; Hew & Brush, 2007).

Faculty development at the beginning and throughout the execution of the new technology, such as the iPad, in the classroom is essential for leaders of the educational technology revolution (Yukl, 2009). In addition, leaders who cultivate promising practices in the early stages offer and support new and creative ideas, arrange for faculty training, use images to examine new processes, and encourage research with different tactics (Yukl, 2009). Ali and Murthy (2010) suggested that to correspond to current technological changes, faculty who teach computer and technology courses constantly modify their curriculum (Ali & Murthy, 2010). These modifications may include the installation of a different type of software the faculty can install without support or anticipated updates that include altering textbooks. However, collaborating with technical staff may be required for most new technological advances (Ali & Murthy, 2010).

Therefore, contemporary technological updates are more common (Arteaga & Lucas, 2005), but they often disrupt other technologies, according to Ali & Murthy (2009). Moreover, the variety of technological selections continues to increase as claimed by Bardzell (2006). When updating technology courses,

the role of the faculty is critical (Ali & Murthy, 2010). The faculty member needs to have an adequate understanding of the new technology, such as the iPad, as well as understand the problems which may arise as they will be the ones teaching the courses (Ali & Murthy, 2010).

Previous research by Daccord (2012) proposed that there is a lack of teacher training in classroom supervision of iPads. In addition, colleges seldom provide instructors with their own iPads, assuming teacher training in a private setting will convert to proficiency in a working situation before distributing iPads to students (Daccord, 2012). However, Young (2004) stated that technology should provide teachers and students with enriching educational experiences in the classroom. Many organizations have spent little time or money on preparing professors to use the existing technology competently, and have paid millions of dollars constructing smart classrooms (Young, 2004). The results from student assessments show that a record number of students consider the inadequate use of technology as the leading cause of a professor's decline in effectiveness (Young, 2004). Students object when professors do not use technology in the classroom (Young, 2004). For that reason and others, it is essential that institutions invest time and money in educating professors on the use of diverse platforms adequately. In addition, explaining the circumstances under which the technology—hardware and software—is best suitable helps to show that educational technology, such as the iPad, is a valuable tool used to stimulate learning (Young, 2004).

Lack of Resources

Fairlie and Grunberg (2014) stated that a lack of finances is the primary concern for community college students when purchasing iPads. Additionally, approximately one-third of students residing in homes with earnings of less than $20,000 do not have computers or iPads with internet access, and this undoubtedly affects the success of students (Fairlie and Grunberg, 2014). However, Domonell (2014) found that 78% of college students, noted in a 2013 Noel-Levitz E-Expectations report, had consistent access to an iPad. While acknowledging that this statistic had likely increased in 2014, Domonell (2014) also questioned the fate of approximately one in five college students who still do not have that access to iPads (Domonell, 2014). For many low-income and first-generation college students, the iPad, or a smartphone, is not attainable (Domonell, 2014). Therefore, this situation produces learning obstacles for students. Domonell (2014) stated that, per Brittania Morey (Director of Communications for the Iowa College Access Network), technology is so integrated into American culture that students who do not have access could have some difficulty intellectually, financially, and in general.

In addition, Benham (2014) noted that instructors distributing computing devices for in-class use have concrete and logistical problems. These problems consist of the costs of buying and maintaining the devices, loss of relevant teaching time as devices are dispersed and reclaimed, and the loss when devices are not returned or are broken (Benham, 2014). Despite significant improvements in ease of use over the years, it is extremely likely that some time

needs to be devoted to teaching how the devices are to be appropriately used (Benham, 2014). For these reasons, Bring Your Own Device (BYOD) was regarded as the only potentially feasible means of implementing the use of mobile devices within the classroom (Benham, 2014).

However, BYOD is not the solution; it comes with its own set of potential problems. When instructors require that every student own a device, there is the potential that BYOD shifts the financial burden to students. In addition, while each student would be familiar with his or her own device, the faculty would have to adapt to the capabilities of a multitude of devices (Benham, 2014). Handler (2014) suggested that while the institutions are not the sole reason for slower education and collective development, they must nevertheless do all they can to educate their students with regards to technology.

Furthermore, Moeller and Reitzes (2011) stated that technological accomplishments could be beneficial for a student's educational development. Hence, technology heightens educational achievement, civic obligation, and the distinct/societal progress of students (Moeller & Reitzes, 2011). Whether the problem is due to economic issues or instructor resistance, many community college students still do not have access to iPads in all classrooms. In addition, these issues may influence the implementation of iPad and the use of acquiring knowledge, attitudes, and skills that are essential to meet the demands of life.

Technology Challenges

Karsenti and Fievez (2013) reported that 99% of students believe the iPad is disruptive in the classroom, which can be challenging for them. Students also

noted difficulties when handling the work on an iPad, including trouble with writing extensive essays and dissatisfaction with some of the textbooks, which they detected were incompatible (Karsenti & Fievez, 2013). In addition, a small number of students mentioned that using an iPad had an adverse outcome on their coursework (Karsenti & Fievez, 2013). Similarly, Kay and Lauricello (2014) reported that using iPads inside the classroom can lead to concerns such as social networking with peers, playing games, watching video podcasts, or surfing the web for individual use.

<div align="center">**Why Challenges are Relevant**</div>

According to Geist (2011), the above challenges are significant since teacher participation and the approval of the iPad were found to be essential. No educator can afford to overlook technology since universal computing and mobile educational settings have become important because technology allows flexibility in many venues. Due to iPads and their abundant accessibility to information and data, students will be diverse with the use of iPads; therefore, to meet the requirements of these students, education will need to advance (Geist, 2011).

Bielec (2010) stated that desktop machines had become anachronisms because "place" is no longer sufficient; rather, the focus has shifted to immediate accessibility and gratification. Students in 2017 carry fewer devices but enjoy increased levels of communication, connectivity, speed, and functionality (Bielec, 2010). Therefore, students' lives are integrated into technology wherein they enjoy instant and constant access. In addition, students' personal preference in using the iPad and limitless flexibility enable them to remain connected and

engaged, almost without constraint—and that is the way they want it (Bielec, 2010).

Many educators find new technologies and computers to be distracting toys rather than beneficial teaching tools (Educause, 2011). However, in colleges, the position educators have taken influences the speed and rate at which computers are implemented. Therefore, these influences include those of college administrators who frequently focus more on possible risks than benefits, as well as teachers' attitudes (Educause, 2010). Also, teachers typically prefer to be comfortable with the instructional methods and the tools that they are using. It is difficult for teacher and higher education institutions to be authorities with this rapidly transforming world of technology (Educause, 2011). An approach that could profit both teachers and students would be a collaborative tactic for learning about mobile technologies, such as the iPad. Nonetheless, the attitude and consideration of teachers concerning how innovations can be educationally incorporated are key factors that put colleges behind businesses in implementing technology (Educause, 2010).

Summary

Using the iPad as an educational technology tool can play an essential role in altering both student knowledge and lesson plans (Riley, 2007). However, there is limited research on community college students and the effectiveness of technology in their schoolwork. Schacter (2011) found several research studies that have connected the use of iPads in the classroom with enriched academic improvement. In addition, Guess (2007) stated that changes in students'

technological habits are evolutionary, rather than revolutionary. For example, although 73.7% of college students have laptop computers, only about a fourth of them bring their computers to class once a week.

Moreover, students want to safeguard the private environment of their social networking tools and favor modest, as opposed to widespread, use of technology in the classroom (Guess, 2007). Nevertheless, poor instructors are disadvantaged with or without IT; the same is true for good instructors (Guess, 2007). What the students need for technology, such as the iPad, in the classroom is essential.

Futhermore, Skipton, Matulich, Papp, and Stepro (2006) stated that today's college students are mainly digital students, and intrinsically, are graphic and kinesthetic learners who select and absorb information from the beginning through the execution process and social interaction. Therefore, they contend that to meet the educational style and inclination of students who focus on "What's in It for Me (WIIFM)," instructors need to alter the learning process by using technology in the classroom (Skipton et al., 2006). In addition, Skipton et al. (2006) suggested that colleges recognize the students' need of a wireless setting that enables them to connect over the internet to assess topics on the network during class. Additionally, the institutions need to build actual learning places that address the digital learner. For example, a "smart classroom" can regulate technology developments through a distinct boundary and is comprised only of educational technology (Skipton et al., 2006). The integration of technology in the classroom for the delivery of education is continuously shifting,

due to the pressure on traditional institutions of higher education to use new technologies (Concannon, Flynn, & Campbell, 2005). Consequently, this study added to the current body of knowledge.

Chapter 3: Methodology

Introduction

The purpose of this qualitative case study was to show how TRiO community college students think iPads help in achieving course objectives. This chapter presents the research methodology used to record the TRiO students' experiences at Bill Rice Community College in Northern Alabama. An exploratory case study method, within the bounded system of BRCC, guided this study. This chapter concentrates on the design of the study, the setting, the ethical considerations, participant selection, the role of the researcher, data collection methods, data analysis, and validity and reliability.

Design of the Study

Farghaly's (2018) recent study revealed that the role of the researcher in building meaningful information is based on the naturalistic prototype and the positivist paradigm—also known as constructivism. In addition, schemes such as historical research, case study, phenomenology, narrative research, ethnography, action research, and the grounded theory qualitative approach offer rise to research when researchers have insufficient knowledge concerning the study. Consequently, qualitative research often produces a theory. Because qualitative research is generally inclined to use small samples, the research might produce large sampling errors (Farghaly, 2018). The employment of qualitative perspectives and data collection approaches is gaining increasingly more attention from researchers in the field and has a long custom in educational technology research, contrary to popular belief (Luo, 2011). In addition,

qualitative studies consist of descriptions and interpretations of textual, visual or verbal data. Also, qualitative studies are the systematic collection, and the organization of data (Hammarberg, Kirkman, & DeLacey, 2016). Furthermore, the benchmarks used for judging the value of the qualitative study assure the approaches taken to conduct the research were valid (Hammarberg et al., 2016).

Baxter and Jack (2008) suggested that a qualitative case study is a research strategy which aids in the investigation of a phenomenon. A qualitative case study proves that the phenomenon is not analyzed through one lens, but rather, a variation of lenses. The different perspectives allow for numerous aspects of the phenomenon to be discovered and understood (Baxter & Jack, 2008). Further, Creswell (2014) explained qualitative research as a methodology for understanding the meaning of personalities or groups assigned to a mutual or human problem or discovery. The procedure for conducting the research contains information generally contained in the participants' environment, such as inquiries and analyses of the data by researchers, techniques, and common themes (Creswell, 2014).

Moreover, Merriam (2002) added that qualitative researchers are concerned with accepting analyses in a detailed framework. Knowing how participants practice, as well as the network, is significant to the researcher's results in an informative qualitative way (Merriam, 2002). The emphasis of qualitative research is on words rather than numbers, as it focuses on the participants' specific situations; such an inductive approach is the primary strength of qualitative research (Maxwell, 2005). The purpose of qualitative

research is to offer a detailed understanding of a central phenomenon; therefore, this approach is not generalizable to analogous situations (Creswell, 2009). Hence, qualitative research cultivates the participants' perceptions which may inform other educators, with the understanding that educational systems and environments differ.

As confirmed by the review of the literature, iPads are incorporated into the students' daily lives and the classroom. More literature on the topic can only benefit instructors and colleges in the future (Goodwin, 2012). According to Creswell (2014), qualitative research is used to improve theories when restricted or insufficient theories exist, and when current theories do not sufficiently capture the intricacy of the problem examined (Creswell, 2014). Therefore, a qualitative case study was a better fit for this study's research problem (Creswell, 2014).

A qualitative case study allowed the researcher to organize an in-depth investigation of a group within its real-life situation. This attempt best suited the requirements of this study (Lambert, 2012), while allowing the researcher to understand situations more clearly and intensely from diverse standpoints (Lambert, 2012).

Qualitative research develops and tests hypotheses to produce a theory after using the inductive method to discover the experimental data for patterns and relationships (Farghaly, 2018). Moreover, a qualitative case study is a research method that permits the researcher to understand a specific event or an individual group. When the related behaviors cannot manipulate the data collected through interviews, documents, artifacts, and observation, the

recommended research method for investigating current events is the qualitative

case study (Lambert, 2012). Qualitative case studies include characters, setting,

problems, events, and conflicts can resemble a richly detailed story (Dooley,

2007). Based on Dooley's research (2007), this qualitative case study examined

the students' performance as demonstrated through achieving course objectives.

The case study assisted the students with a firsthand learning experience as

well.

The Setting of the Study

The Bill Rice Community College (BRCC) was chosen for this study

because of its geographic location, its student demographics, and its diversity.

This study was distinctive and centered on examining the experiences of various

individuals. It was essential to study and understand the students' experiences

on how the iPad contributed to the students achieving course objectives. The

college is part of the Alabama College System and is accredited by the Southern

Association of Colleges and Schools Commission on Colleges to award

Associate Degrees and Certificates. The institution's student population consists

of 55% African American, Non-Hispanic; 37% Caucasian, Non-Hispanic; 1%

Asian or Pacific Islander; 2% Hispanic; and 5% other. Although the student

population at BRCC is primarily a minority because of the high percentage of

African American students, it is racially and ethnically diverse. The findings from

this study can produce new literature about the experiences of TRiO students

from a diverse group.

Ethical Considerations

After identifying the location for this study, this researcher examined ethical considerations related to the study's location, program, and participants. Researchers should review and anticipate ethical issues that may arise during their study (Creswell, 2014). Researchers need to defend their research participants, guard against transgression and indecency that might reflect on their organizations or institutions, encourage the honor of research, as well as cope with new, challenging problems, and create trust with the participants (Creswell, 2014). As part of an ethical review, researchers should also have their research proposal evaluated by the Institutional Review Board (IRB) on their college's campus (Creswell, 2014). IRB committees exist on college campuses because of federal regulation boards, which offer protection against human rights violations. As required by both the Morgan State University and Bill Rice Community College (BRCC) rules and guidelines set for conducting research, all IRB guidelines were followed. As part of the IRB application submission, study information, sample participant consent forms, a list of proposed/sample questions and procedures, and sample marketing fliers/participant request letters and emails were submitted.

Participant Selection

This study used a purposeful sampling approach to identify participants who provided valuable and significant answers to the primary research question. As noted in Ravitch and Carl (2016), researchers must decide – before determining data collection methods – who the study participants will be. Both

researchers observed that purposeful sampling presents content that is unique to a specific population and location. The individuals selected to participate in the sample bring exceptional quality to the study, such as select accounts, their experiences, awareness, and their knowledge of their surroundings (Ravitch & Carl, 2016). Qualitative researchers should determine the study's relevance to the broader population and give examples regarding their characteristics. In qualitative research, small purposive sampling has a definite pattern. Certain individuals are selected especially because their characteristics apply to the study. Maximum variation generated within a purposive sample, may also be used. For example, participants were selected based on gender, the year of study, and place of work. Convenience samples include individuals who can participate as much as possible in the study, or those who are most available (Anderson, 2010).

This qualitative case study examined the experiences of a small group of TRiO students at Bill Rice Community College working toward achieving course objectives in the classroom. Appendix A is the students Informed Consent Form, and Appendix B is the researchers IRB form.

Role of the Researcher

The researcher's role as an instrument in this case study was to collect, transcribe, and analyze data through individual interviews and group sessions. While different styles of interviewing were possible, the researcher chose semi-structured interviews, standardized open-ended, face-to-face interviews and group sessions to observe the perceptions of students using iPads in the

classroom (Murphrey, 2010). Creswell (2014) reported that in a unique

qualitative case study research methodology, the interviews should be conducted

face-to-face, via telephone, and on-site inside the community college setting

(Creswell, 2014; Patton, 2002). The interviews, conducted in a dwelling

designated by the informers, provide accessibility, efficiency for the informants,

and ease (Creswell, 2014). Prior to each participant's dialogue, the researcher

requested authorization to record the interview and to address privacy concerns

and any further issues. The key participant interviews were noted, and the

researcher took minutes to increase the accuracy of the information gathered

(Creswell, 2014).

Data Collection Method

Two word-based analysis methodologies were selected to examine the

data recorded during the interviews: word repetition and keywords in-context

(KWIC). Both methods appeal to the strength of a simple principle: if one wants

to understand what people are talking about, one must look at the words used by

the latter (Ryan & Bernard, 2003). The recurrence technique relies on the

researcher's interpretations and analysis of the perceptions or repeated terms in

the participants' narratives and responses. Recurrences and associative links

are the most straightforward and most direct signals of a pattern, an organized

thought or a mental structure that denotes an aspect of the phenomenon

(D'Andrade, 1991; Ryan & Bernard, 2003). In this analysis, the identification of

word repetition was achieved through responses to the research questions.

Recurring words were noted as indicators of themes and concepts that shaped the categories of activities the participants described.

The ways in which the participants measured those activities were also examined. The keywords in-context (KWIC) method was employed to identify and analyze the value research participants placed on such activities. As word repetition was used to identify the main concepts and categories of significant activities, KWIC can be used to observe and describe methodically the context from which these concepts emerged. By doing so, associative meaning and value can be detected (Ryan & Bernard, 2003). KWIC is centered on pure observation and allows for analysis to happen during the process; to comprehend a concept, one must look at the way it is used (Ryan & Bernard, 2003).

The research questions were used as the primary reference point to identify relevant themes that described the research participants' claims regarding the use of iPads in the classroom. The participants' responses to interview questions were recorded by audio and reported in their words, and separated into themes, which were developed by the qualitative data that were later transcribed and analyzed for recurrences. The themes evolved when six or more participants and administrators discussed the same issue. Also, the syllabus was included in the case study. A summary of the course syllabus was reviewed to determine the iPad's usefulness regarding learning content when used by student participants in the course. The syllabus also helped in determining if enough activities were included that allowed students to learn the material and access content on the cloud and the internet at any time or from

anywhere. Additionally, the syllabus had instructional videos, collaboration with groups, interactive digital media, and integrated applications to assess the potential level of active learning of the participants.

Interviews with students, an administrator, three teachers, and a content analysis of a course syllabus were the primary data sources in this Qualitative study. Students described their academic performance in detail by relating their educational experiences in college. Through comprehensive and in-depth descriptions, students explained how their use of the iPad in the classroom assisted them in a performance that leads to achieving course objectives. The students' recollection of events and situations provided a view into their environments and educational journeys.

Data Analysis

The researcher conducted semi-structured interviews with ten (10) TRiO students at Bill Rice Community College. This qualitative case study was conducted through face-to-face focus groups and Skype, to gather data on the experiences of students participating in the TRiO Program at BRCC. Creswell (2009) explained that in qualitative case study data collection, the researcher uses a wide array of procedures to build an in-depth picture of the case. How the information is evaluated should also be included in the description of the study. The conclusion of the data collection explained and then justified data saturation. A helpful rule when deciding how much material to include in a study is to provide ample information to be able to conduct parallel research. Acknowledging that the data must always be within the framework of their production is one of the

beneficial aspects of qualitative research (Anderson, 2010). One of the strengths

of qualitative research is legitimacy and grounded on the participant, the readers

of an account, and establishing whether the findings are precise from the

perspective of the researcher (Creswell, 2014).

The present study's qualitative research examined student responses to

the use of iPads as the supporter for learning educational content in the

classroom (Miller, Greene, Montalvo, Ravindran, & Nichols, 1996). The

information was gathered through student interviews, interviews with the

administrator of the TRiO students, teachers, and the syllabi of the courses TRiO

students were enrolled in during the 2017-2018 year. The primary purpose of

interviewing the students was to determine and understand how iPads were used

in learning and achieving objectives. Furthermore, an additional objective was to

determine if iPad use in the classroom would move beyond drill-and-practice

events and move toward engaging students and making real-world connections

(Ertmer, 2012). Field notes and audio recording were used to record information

to gain an understanding of how the students interpreted their work. The

purpose of interviewing the administrator and teachers was to understand how

they observed the use of iPads by the students. The interview questions

produced the most in-depth responses from the administrator and teachers.

Additionally, the interview questions were used to gain insight into the

administrators' and teachers' perceptions of the students' skills and to uncover

how these skills could be implemented within the college curriculum. Also, the

interview questions were used to assist students in learning course material that

led to achieving course objectives. The purpose of reviewing the instructors'

syllabi was to see if the implementation of the use of iPads in the classroom was

reflected in the plan. Furthermore, the research served as a tool for mirroring

and guiding the emerging themes. The interview questions for the administrator

and teachers helped in achieving awareness of the administrators' and teachers'

perceptions of the students' skills and how these skills could be implemented

within the college curriculum to assist students in learning. Reviewing the syllabi

supported the qualitative case study by proving how iPads are used in

completing assignments and retaining content for later usage. The above

material, if studied continually, can encompass clear references and specifics

related to this study (Yin, 2014).

Summary

This Qualitative Study seeks to offer the experiences of TRiO students in

a community college setting. Specifically, the study seeks to present whether

TRiO program participants' use of iPads in the classroom played a role in their

ability to learn as demonstrated by achieving course objectives.

The researcher provided information that supports the reasons and importance of

conducting this study as a qualitative case study. The next chapter presents the

results of the completed case study.

Chapter 4: Results

Introduction

The purpose of this qualitative case study was to show how TRiO community college students think iPads help in achieving course objectives. The researcher used a qualitative case study to investigate students' perceptions of the use of iPads at Bill Rice Community College. The central research question was: How did classroom experiences with iPads affect students' achievement as demonstrated through achieving course objectives? Two sub-questions also guided this inquiry: (a) In what ways are iPads used in the classroom? (b) What are the perceptions of students, administrators, and teachers on the inclusion of iPads in learning practices?

A qualitative research methodology was used as outlined in Chapter Three for this research study, which entailed interviews of ten TRiO student participants and one TRiO administrator, three teachers, and a review of the course syllabus as data sources. The researcher assigned pseudonyms to protect the confidentiality of all participants. This chapter presents theme identification, the profiles, and backgrounds of participants, central questions and themes, and specific themes for subset research questions A and B, an analysis of the syllabus, student views, and a summary.

Theme Identification

Theme identification is a vital goal of the inquiry of the qualitative data collected from the interviews. Two word-based analysis methodologies were selected to examine the data recorded during the interviews: word repetition and

keywords in-context (KWIC). The recurrence technique relies on the researcher's interpretations and analysis of the perceptions or repeated terms in the participants' narratives and responses. Recurrences and associative links are the most straightforward and most direct signals of a pattern, an organized thought or a mental structure that denotes an aspect of the phenomenon (D'Andrade, 1991; Ryan & Bernard, 2003). In this analysis, the identification of word repetition was achieved. Recurring words were noted as indicators of themes and concepts that shaped the categories of activities the participants described.

The ways in which the participants measured those activities were also examined. The KWIC method was employed to identify and analyze the value research participants placed on such activities. As word repetition was used to identify the main concepts and categories of significant activities, KWIC can be used to observe and describe methodically the context from which these concepts emerged. By doing so, associative meaning and value can be detected (Ryan & Bernard, 2003). KWIC is centered on pure observation and allows for analysis to happen during the process; to comprehend a concept, one must look at the way it is used (Ryan & Bernard, 2003).

The research questions were used as the primary reference point to identify relevant themes that described the research participants' claims regarding the use of iPads in the classroom. The participants' responses to interview questions were recorded by audio, reported in their words, and separated into themes. Also, the participants' responses were developed by the

qualitative data that were later transcribed and analyzed for recurrences. The themes evolved when six or more participants and administrators discussed the same issue. Also, the syllabus was included in the case study. A summary of the course syllabus was reviewed to determine the iPad's usefulness regarding learning content when used by student participants in the course. The curriculum also helped in determining if enough activities were included that allowed students to learn the material and access content on the cloud and the internet at any time or from anywhere. Additionally, the syllabus had instructional videos, collaboration with groups, interactive digital media, and integrated applications to assess the potential level of active learning of the participants.

Interviews with students, an administrator, three teachers, and a content analysis of a course syllabus were the primary data sources in this Qualitative Study within the bounded system of BRCC. Students described their academic performance in detail by relating their educational experiences in college. Through comprehensive and in-depth descriptions, students explained how their use of the iPad in the classroom assisted them in a performance that leads to achieving course objectives. The students' recollection of events and situations provided a view into their environments and educational journeys. The administrator's accounts shed light on the learning process of the students and how iPad usage reinforced their capability to use various learning preferences.

Interestingly, the teachers articulated how this supports the constructivist perspective of learning. The syllabus was used to assess the activities involved in the performance that led to achieving course objectives. The data sources,

which include the perceptions of students, the views of the administrator and teachers, and the course syllabus worked together to generate the following themes for this case study: accessibility, interaction in the classroom with applications and different programs, benefit of the iPad, and improved study skills.

Participants' Profiles

Participants ranged in age from 18 to 67 years, with a mean of 33.7 years, and a median of 44 years. Four of the students were female, and six were male. The TRiO administrator was a 51-year-old male, and the three teachers ranged in age from 50 to 55 years old. Three of the students in the participant group were identified as Caucasians, one as Hispanic, and six as African American. The TRiO administrator identified as African American; one teacher identified as African American; and the other two as Caucasian; all were full-time employees. The demographic information is summarized below in Table 1.

Each participant was assigned a pseudonym to maintain confidentiality. Individual participant information is summarized below in Table 1.

Table 1

Participant Information

Pseudonym	Age	Gender	Ethnicity	Highest Degree	Years at College
Jim	18	M	Hispanic	HS Diploma	1
Peter	26	M	Caucasian	HS Diploma	1.5
Brenda	32	F	African American	HS Diploma	2
Ken	24	M	African American	HS Diploma	1.5
Carolyn	24	F	Caucasian	HS Diploma	1
Tony	29	M	African American	HS Diploma	1.5
Susan	30	F	African American	HS Diploma	2
Terry	44	M	African American	HS Diploma	1
Marcus	23	M	Caucasian	HS Diploma	1
Cam	67	M	African American	HS Diploma	2
Administrator	51	M	African American	Master's Degree	10
Faculty	50	F	African American	Master's Degree	10
Faculty	53	M	Caucasian	Master's Degree	10
Faculty	55	F	Caucasian	Doctorate	16

Central Research Question

Central Question: How did classroom experiences with iPads affect students' achievement as demonstrated through achieving course objectives?

The central research question examined the experiences that occurred in the students' lives which assisted them in the performance that led to achieving course objectives. Students were asked to recall significant experiences using the iPad in their community college computer courses. All students had vivid memories of their community college computer courses and described the skills they had learned, as well as the challenges, accomplishments, and struggles they had encountered. The comprehension of these critical elements, as described by the student participants, provided insight into the experiences that

occurred and how those experiences assisted the students in the performance that led to achieving course objectives.

Subset Research Question A.

In what ways are iPads used in the classroom?

The subset research question A examined the experiences that occurred in the students' lives that assisted them in their use of iPads in the classroom. Students were asked to recall significant experiences with iPads from their community college courses. The teachers were asked to recall their observation of the students using iPads in the classrooms. The students had vivid memories of their community college courses, and they described their primary use of iPads. The teachers indicated that the integration of iPads in the classroom enhanced the learning abilities of students, and that their grades increased. The mastery of these key elements, as described by the student participants, provided insight into the experiences that occurred, and how these experiences assisted the students in learning as demonstrated by their performance.

The teachers stated that iPads allowed for enhanced record keeping of students' development, and that documented assessments could be counted swiftly, delivering students with almost direct feedback. Additionally, the teachers suggested that iPads had increased students' performance in reading and that students' had reported a boost of inspiration when the iPad was used. Moreover, students showed improved levels of teamwork on schoolwork using their iPads, according to the teachers. In addition, teachers stated that when associated with traditional methods, applications were more beneficial in their teaching of

computer courses. The teachers also conveyed how the usage of the iPad made an improvement in the students' grades.

The iPad's primary use is for reading electronic textbooks, but it has many possibilities that extend further than reading. The iPad can transform a student's education only when instructors learn the ways to unleash its full potential for supporting teaching successfully. To incorporate iPads into the classroom, teachers require training on how to use iPads. Before asking their students whether they could create videos, for example, instructors must understand how to create videos themselves. Students are not customers; they turn into creators when using the iPad.

Subset Research Question B.

What are the perceptions of students, administrators, and teachers on the inclusion of iPads in learning practices?

The subset research question B reviewed the experiences that students, an administrator, and teachers reported as being the changes in learning practices which involve the strengths and weaknesses of using iPads in areas such as student performance. Students, an administrator, and teachers were asked to recall significant experiences regarding the change in learning practices with the use of iPad. The administrator was asked to recall his observation of students using the iPads in the labs. The administrator had prevailing memories of the students' community college courses experience and described their learning capabilities in the lab.

The Common Themes

The themes were connected to the purpose of the study, which was to show how TRiO community college students think iPads help in achieving course objectives. The ten interview transcriptions of participating students were analyzed and coded using first round open coding and axial coding. A qualitative study guided by Magilvy, Joan, and Thomas (2009) was used to guide the data collection and analyze this stage of the study. The participants were asked modest questions that were intended to evoke replies within narrow limitations to facilitate analysis. Interview questions were framed to obtain the students' views on the expectations and convenience associated with iPad use, as well as the need for iPads with respect to community college students. To assist participants in recalling and reflecting, several questions were provided, and participants were given a chance to think about their different uses of iPads.

A table was developed to organize each group's codes. Then, the interview transcriptions of the administrator were used for cross-comparison analysis to ensure validity. Additionally, the themes were relevant to the significance of the study, which investigated the elements of participants' respective experiences in their educational journey at the community college. Based on the research questions, all interview questions were formed to investigate not only the sources but also the experiences that contributed to developing students' performance and achieving course objectives. All interviews with students, the single interview with the administrator, and teachers were audio recorded, later transcribed, and coded for themes. Comparable replies to each interview question were grouped into categories. The generation

of a theme was based on the frequency of parallel responses in a category, with six or more similar replies contained in one theme.

Based on the data from the interview, the following four common themes emerged:

1. Accessibility

2. Interaction in the classroom with applications and different programs

3. Benefits of iPads and

4. Improved study skills

These themes are reflected in Table 2 below, which also further enhances the research by categorizing the themes with the interview questions and Achievement Goal Theory. All interviewed students attended the community college, while the administrator and teachers were employed at the college. More detailed descriptions of the precise students' experiences, as well as the administrator's, and teachers' experiences that resulted in the themes are included in quotes following the presentation of Table 2.

Table 2

Alignment of Research Questions, Emergent Themes and Achievement Goal Theory

Research Questions	Emergent Theme(s)	Achievement Goals Theory
Central Research Question	Benefits of iPads Interaction in the classroom with	Learning Behavior Performance Goal
How did classroom experiences with iPads affect students' achievement as demonstrated through achieving course objectives?	Applications and Different Programs Accessibility Improved Study Skill	Performance Goal Achievement Motivation

In what ways are iPads used in the classroom?	Accessibility Benefits of iPads	Performance Goal Achievement Motivation Learning Behavior
What are the perceptions of students, administrators, and teachers on the inclusion of iPads in learning practices?	Benefits of iPads Interaction in the classroom with Applications and Different Programs Accessibility	Learning Behavior Performance Goal

Theme #1 Accessibility

Accessibility was the first theme that emerged from the questions asked

by the researcher. Student participants endorsed the use of the iPad as opposed

the desktop computer in the classroom, by the questions asked regarding self-

management skills, efficiency, skills or knowledge, academic career, and

professional goals. In addition, accessibility emerged from questions asked to all

participants regarding the advantages and disadvantages of having or not having

an iPad in the classroom and other skills and knowledge. To improve their

learning abilities, student participants detailed the advantages and disadvantages

of having or not having an iPad. Jim stated, "By using the iPad, more online

materials were available." He also suggested that the iPad was a valuable device

to increase flexibility in the classroom. Peter shared that he could download the

eBook of the course for easy access. Brenda said, "The iPad is a beneficial tool

to increase portability and productivity because of its small size."

Accessibility aligned with the achievement goal of performance.

Participants expressed their views concerning the accessibility of iPads in the

classroom. Additionally, the participants expressed their views on how the iPad's

accessibility can increase the knowledge and skills needed for achieving their goals in the classroom. Furthermore, accessibility emerged from questions regarding the ability to access the internet and social and other media. Several student participants shared their experiences concerning access to the internet when operating iPads. Ken remarked, "The iPad is useful for better access to images that may be needed for the course." Carolyn stated, "The iPad made it easier to access writing applications and compatible applications with Microsoft Word and the presentation app, Prezi." Tony said, "The iPad was useful to find other library websites to obtain resources for academic work." Susan commented that the iPad is accessible and used by all ages from 15 months and up. The administrator commented that the students had mixed responses when asked about access to the internet and social media, and that it was a distraction in the lab.

Moreover, accessibility emerged from questions concerning learning abilities. Several student participants shared their experiences concerning their ability to learn the material with the use of the iPad. Terry stated, "The iPad is useful in emailing the instructor to clarify assignments and to review class notes." Marcus added that the iPad is an efficient tool that has helped him in learning and staying engaged in the classroom. Cam remarked, "I like that I can carry the iPad around and can actually manipulate the iPad whereas I cannot work on the computer." Several students voiced concerns when other students used iPads to play noisy games or watch videos on YouTube instead of doing their coursework.

Theme #2 Interaction in the Classroom with Applications and Different Programs

Interaction in the classroom with Applications and different programs was the second theme that emerged from the questions asked by the researcher. Numerous participants, as well as the administrator, provided detailed and precise answers.

Tony stated, "The iPad made it possible for accessing different applications for solving problems related to the course content." Susan said, "The iPad is essential in solving problems when learning to code." Additionally, she said the copy and paste feature is a plus when learning different ways to generate reports. Terry stated, "The iPad is perfect for developing applications that solve problems dealing with the course content." Marcus remarked, "The iPad has assisted me in being more engaged in learning how to solve problems." Cam commented that the iPad helped in actively displaying what he learned and how it affected his problem-solving abilities. Carolyn stated, "The iPad is good for academic work while working in groups with other students."

Additionally, she said one could easily go back to items which have been researched on a topic for the class. The administrator expressed that the weakness of some students was using iPads off-task and too often in the lab. He commented that the strengths he noticed included the ability to search for a variety of resources that could be reviewed before their next classes. Additionally, he noticed that students were willing to do the assignments because the iPads gave them easy access to complete them.

In addition, interaction in the classroom with applications and different programs aligned with performance demonstrated through potentially higher grades. Participants stated that using iPads to complete tasks helped them develop competence, and they support their efforts in achieving course objectives in the class.

Several other participants shared what they felt were advantages and disadvantages. Jim stated, "An advantage was that I could download additional material for class, and a disadvantage was distractions in the class." Jim also referenced that the iPad made him more aware of technology, and how the iPad could assist him in learning. Peter added, "I like having a laptop versus a desktop and being able to research and find online resources." Moreover, he said his study skills have improved because of the iPad, as well as his ability to search Google for material for class. Brenda remarked, "The iPad is handy, I can take notes, and visit different websites for course material." Ken stated, "The iPad helped with certain aspects of the course that made the iPad beneficial to the desktop computer."

Furthermore, he said he liked the mobility of the iPad. Carolyn remarked, "I communicated with classmates online to complete academic work." Student interaction with applications and different programs is essential to student achievement, and using the iPads in the classroom helps in applying course content to solve problems.

The researcher asked the student participants questions regarding the convenience of using iPads. Jim stated, "By having an iPad to use in the

classroom, my self-management skills were better, and I am more efficient in completing my assignments." He also acknowledged that it was easier to share information and it assisted him in getting familiar with how to search for information that would help him in completing tasks. Peter remarked, "Having an iPad assisted in the development of better computer skills and it was a plus to have the iPad available to use." Brenda added, "The iPad assisted in developing better time management skills by using the calendar to keep abreast of homework assignments and due dates." She also stated, "The exposure to learning different applications with the iPad is essential." Ken commented that his iPad usage had assisted him with classwork, due dates and time management. Carolyn added, "The iPad assisted in my understanding of different concepts reviewed in the course."

Also, when discussing their thoughts regarding academic career and professional goals, students noted that accessibility was also a prominent theme. Most student participants perceived the iPad as a useful learning device that kept them actively engaged in the classroom. Tony remarked, "Using the iPad assisted me in learning how to search for scholarships and grants that I can use after receiving my associate's degree." Susan added, "The Apple iPad is a tremendous addition because it will assist in learning how to develop applications that could be used for getting a job." Terry commented that his iPad usage assisted in searching the internet for resources that pertain to a specific course. Marcus stated, "The iPad made online testing, sending resumes, and reviewing job banks easier." Cam mentioned that the iPad assisted in obtaining resources

for academic and professional goals. The participants expressed how convenient it was to have an iPad and how its use supports their efforts to achieve the performance goals established in the course.

Theme #3 Benefits of iPads

Benefits of iPads was the third theme that emerged from questions asked of participants concerning better online resources, learning course content, and creating and editing documents. To improve their learning abilities, several student participants detailed the different benefits of using the iPad. Jim stated, "I have used an iPad for a year and a half to FaceTime, play games, and to watch YouTube videos." He also stated that the iPad assisted him in learning to multitask and research course content. Terry said, "The iPad assisted in examining information, contrasting, and linking concepts." Marcus commented that the iPad allowed him to think and make constructive decisions pertaining to course content. Cam added, "The iPad was used to complete activities that involved learning by doing." The benefit of the iPad that was used in the classroom aligned with the achievement goal of the learning behavior. Participants voiced their sentiments concerning the benefit of the iPad in the classroom, plus how the iPad is a useful learning tool that makes the subject matter more interesting.

In addition, several other student participants discussed their experiences with the iPad in the classroom, plus how the iPad assisted in them receiving a better grade. Peter said that he had been using his iPad for four years, but the primary use of the TRiO iPad was academic coursework. Brenda remarked,

"The iPad assisted in solving problems dealing with the course content in a computer hacking class." She also mentioned it was a beneficial tool for case problems that required critical thinking. Ken commented that he used the iPad for class projects and that the iPad was beneficial because of its mobility. The potential for using iPads in the classroom thoroughly is still being explored, but iPads can be used to assist with learning course content, creating and editing text, and developing learning abilities.

Furthermore, to improve their learning abilities, several participants detailed the different benefits of using the iPad. Tony mentioned that the iPad assisted him in being more detail-oriented in class, in creating and editing documents for homework, and in engaging in discussions with his classmates surrounding the course. Susan added, "The iPad made it easier to interact with other students in the course using emails and WebCT." She also stated that it was an easy tool for learning coding, C++, and HTML. The administrator noted that the students had instant access to research and reading material, and could download their textbook to their iPads. The administrator also mentioned that the students were engaged and eager to learn their course content, and spent an average of two hours a day in the labs.

Theme #4 Improved Study Skills

Improved study skills were the fourth theme that emerged from questions asked to all participants regarding how the iPad helped to enhance learning and the quality of work produced. To improve their study skills and learning abilities, various participants detailed how the iPad assisted in improving their study habits. Jim remarked, "The iPad assisted me in learning more material." He also stated that by using the iPad, the quality of his work was better. Brenda remarked, "When using the iPad, you have the material right in front of you to review at your fingertips." Carolyn commented that by using the iPad, she became comfortable with the equipment, and her thought process also became simpler when trying to learn the information.

Additionally, she stated that the quality of her work was much better. Tony stated, "The iPad usage has increased my knowledge, and I now ask questions and answer questions in the classroom." Cam remarked, "Regardless of my ability, the iPad is a learning device that has assisted me in engaging with all the students in my courses."

Improved study skills aligned with the achievement goal for achievement motivation/engagement. Participants voiced their views concerning their study skills in the classroom with the use of the iPad. Furthermore, participants voiced their views on how the iPad can be influential in creating a learning atmosphere that engages students no matter what kind of barriers occur. Furthermore, several student participants shared their experiences concerning improved study skill that emerges regarding ways the iPad helped in enhancing learning and

building self-confidence. Peter stated, "The iPad has assisted me in increasing my ability to develop better learning skills." He also stated that he used the iPad to search for information and for developing quality papers. Ken said, "Using the iPad made learning new material fast." He also mentioned that he was more confident when questioned about class topics in the classroom. Susan said, "The iPad has enhanced my ability to learn more by collaborating with other students." She also said the quality of her work is better when using the iPad and she is now achieving her course objectives. Terry added that the iPad assisted in improving his learning and motivated him when completing tasks. Marcus commented that by being in cooperative learning groups, he utilized the iPad to accomplish the tasks, and to connect with his fellow classmates.

Analysis of the Syllabus

An analysis of the syllabus was used as a data source in addition to the interviews. A content analysis was conducted with these documents to see if 30% of assignments involved the use of the iPad in each lesson. The researcher chose five different courses and reviewed syllabi that involved the use of iPads, which were provided by the instructors from each class to the researcher through email. The curricula were written for instructors and the students. The students could access the syllabus through CANVAS, a learning management system used by the BRCC to manage enrollment, share documents, submit assignments, and assign grades. There were enough resources listed on the syllabus that someone working without instructions could learn valuable skills using an iPad by following the material and exercises. Moreover, the plan

included the name of the instructors, their office hours, and a detailed course description of the course, author of the textbook, publisher, and date and time of class.

In addition, the syllabus outlined how the course works for students, the role of the instructor, in-class assignments, materials and technology, and required readings. The students' learning objectives were listed, along with a course outline of the topics. The topics of the courses comprised of iPad activities used in the classroom are as follows: (a) creating and accessing open source learning, (b) demonstrating connections between theory and real-life scenarios with mapping applications, (c) explorations of news applications and websites, (d) research, and (e) class projects using presentation software. All activities mostly involved the use of the iPad or instructions on how and when to use the iPad in gaining knowledge about the course. The syllabus was used as a complete class plan along with readings from open sources and textbook chapters. The syllabus also listed due dates for all assignments and exams. Furthermore, the syllabus contained hyperlinks to different videos, as well as to the instructor demo for assistance.

Another aspect of the syllabus is the description of the assignments as in-class or online, and each section was defined easily for clarity. Additionally, the assignments included some lectures on a few important theories, but the syllabus stated that most of the class time would be spent completing hands-on exercises using the iPad. In addition to the assignments, a description of the exams was also outlined, along with the grading method for in-class assignments, online

assignments, and group projects. Furthermore, the curriculum defined policies regarding attendance, harassment, discrimination, make-up work, electronic mail, and classroom etiquette/rules. An explanation of the tutorial services, technical support, canvas integrity, and academic integrity pledge and honor code was also outlined. Moreover, information displayed on all course syllabi consisted of the following: a statement concerning the Americans with Disabilities Act, the protocol for student concerns/complaints, inclement weather, campus police, a disclaimer, and a signature line for the student and instructor.

The syllabus was thorough, and learning to use the iPad was not the total factor for the students to excel in the course. Instead, students needed to demonstrate a willingness to learn. To learn the content, students used the iPad to browse the web and view other works. Open-source examples also contributed to the learning of the content. Most importantly, the syllabus encouraged student participants to work with their colleagues, both inside and outside the classroom, as well as in-person and online to learn the content and succeed in the course.

Views of Students, Administrator, and Teachers

According to the students, access to the iPad heightened their interest and engagement for the computer course. Improvements occurred for the students/participants themselves. The students were enthusiastic and felt fortunate to have iPads for their academic and personal use for the length of the computer course. Participating students were more involved in the methods and reported that they were highly aware of what was required of them for their

assignments and on how the iPad operated. Furthermore, they also acknowledged knowing the value of using their iPads for a specific task or the completion of an iPad assignment. The administrator and teachers all felt that the iPad improved student engagement regarding efficiency, ease of access convenience, and speed. According to the administrator and teachers, the iPad improved the course and class assignments/activities when demonstrating different activities in the lab and classroom. The integration of the iPad into the students' learning, as well as their day-to-day coursework schedule, was so apparent that the student participants rapidly noticed a change in learning as demonstrated by achieving course objectives. However, aspects such as access to Wi-Fi hotspots, numerous after-school activities, understanding of technology, and computing access at home were contributing factors to the students' level of efficiency.

Overall, students conveyed that they found value in the iPad for the following reasons:

1. They had in their possession state-of-the-art, cutting-edge, innovative technology that they could use.

2. They participated in exploring and contributing to a fresh and motivating element in the course that was intended to increase a basic and required college class.

3. They learned how to use new technology in a computer class and the TRiO lab before others.

4. They respected being treated as authorities and experts when questioned about their experiences and recommendations.

Student participants also conveyed some of the following adverse and critical viewpoints regarding iPad usage:

1. The approach triggered anxiety and was time-consuming as they had to deal with the improbability of a new tool to assist with learning.

2. Along with doing experimental assignments, learning a different technology caused some tension and anxiety as it affected their ability to concentrate on concepts and skills.

3. Several of the iPad project objectives and learning outcomes were extensive, and there was not enough time throughout the class to complete all tasks.

All student participants stated they valued the iPad for various informal, regularly repetitive educational tasks:

1. Conducting basic internet searches/informal research

2. Sending email

3. Note taking

4. Fundamental data/file management

5. Drafting writing assignments

On the other hand, participants did not value the iPad for other educational tasks:

1. File storage and management

2. Formal and extended word processing

3. Electronic database research

The iPad, combined with other technology use in the classroom, reflected the creativity and flexibility of the instructors to integrate new technology. The data from the interviews provided interesting findings on how students used iPads in the classroom, even though the iPad was a change in how they completed assignments in their computer course. Most student participants stated that the iPad usage in the classroom and in the lab helped them achieve course objectives in their computer course. According to Schiler (2003), educational technologies as a learning tool are integrated into the classroom, and with this tool, instructors were more likely to be successful in assisting students to achieve their goals. The iPad is a useful tool in the classroom that helps TRiO students achieve course objectives in their computer class. A variety of applications are used to assist the students in completing their assignments. Taking pictures with the integrated camera, making videos, creating presentations, and developing projects which demonstrate their learning are a few applications that can be accessed through iPads that will help with grades (Crichton, Pegler, & White, 2012).

In addition, the TRiO students could use the iPad to take pictures of notes on the board and increase engagement by collaborating with other students in the class, accessing the Internet, keeping track of assignment due dates, and organizing their assignments. All tasks can help achieving course objectives in the classroom (Crichton et al., 2012).

Summary

This chapter presented the findings from 10 interviews with student participants, one interview with an administrator, interviews with three teachers, and a content analysis of a course syllabus. All student participants at the site experienced at least one or more of the following in learning content and maintaining their academic progress:

1. Learning behavior

 2. Performance goals

 3. Achievement motivation

 4. Engagement

Learning behavior was the most dominant goal for students achieving learning as demonstrated by achieving course objectives while using the iPad. Performance played a vital role in learning the content. In addition, the students' goals of achievement enhanced and produced academic progress in the class. If a student's learning and performance as demonstrated by achieving course objectives, the use of the iPad increased the educational learning performance of that student. Conversely, the same applied for low achievement, which indicated low academic performance when iPads were not used or were inaccessible. For students to learn the material, technology tools such as the iPad could assist the students in achieving academic success. The next chapter summarizes the research conclusions.

Chapter 5: Recommendations and Conclusions

Introduction

This chapter revisits the problem of this study and connects the findings from the study to the goal of the research and the theory behind the research. From the research study, four essential findings emerged. This last chapter provides the following:

1. A summary of the research

2. Advantages and disadvantages from the findings

3. Theoretical framework application to findings

4. Emerging technologies

5. Addressing teacher resistance

6. Implications

7. Further research recommendations

8. Summary

9. Conclusion

Summary of the Research

The purpose of this qualitative case study was to show how TRiO community college students think iPads help in achieving course objectives. This study investigated the contribution of the iPad in the classroom of full-time TRiO students at an Alabama community college to know how the iPad assisted the students in achieving course objectives. The research question guiding this study was, "How did classroom experiences with iPads affect students' achievement as demonstrated through achieving course objectives?"

Additionally, the following two sub-questions emerged: (a) In what ways are iPads used in the classroom? (b) What are the perceptions of students, administrators, and teachers on the inclusion of iPads in learning practices?

Three data sources were analyzed for this case study, i.e., individual student interviews, one administrator interview, teacher interviews and elements of a syllabus.

Advantages and Disadvantages from the Findings

One of the significant transformations in teaching that we will see is technology in education. For years, students, policymakers, and teachers alike have pondered the practice of technology in the classroom and the prospective benefits of technology in education, as well as the risks and consequences involved. In community colleges, curricula progressively integrate technology and professors' experimentation with new teaching approaches, with an increasing dispute over technology (Hunter, 2013). On the one hand, the use of technology in the classroom allows students to experiment in education, as it democratizes the classroom and engages them.

In contrast, there is some debate that technology in the classroom can be distracting and even promote cheating (Hollis, 2018). Access to intrusive resources, ghostwriters and exam takers can rob community college students of the learning process. Though technology in education can open doors to discoveries, experiences, opportunities for collaboration and different ways of learning, technology can also be the gateway to new forms of plagiarism.

As a mobile technology, the advent of iPads has changed the education sector since their introduction in 2010. The use of the iPad in the classroom and the general functions of the device are meaningful, but not without its advantages and disadvantages. The goal of the student participants in this Qualitative study is to be successful in obtaining course objectives in their computer class. The students focused on their objectives for selecting, engaging, and continuing their task with an expectation of learning with the use of an iPad. There were advantages and disadvantages to the use of the iPad in the classroom (Meece et al., 2006). Some of the advantages of the iPad included full class participation and instant feedback. In addition, the retention of resources simplified the collection when using the iPad. Also, online free classic books are offered, and the learning has become more enjoyable and productive. Likewise, immediate access to new material increased student-learning experiences.

Some of the other advantages of the iPad is that the device is user-friendly because the case is light and the processing speed is fast. Also, the functionality of the device offers students with disabilities an easy grasp of the technology. The iPad is interactive, a platform for e-textbooks, and it offers a variety of applications and content.

In contrast, the disadvantages of the iPad are that the iPad can detach students from social interactions. For example, students from lower socio-economic households have fewer resources to purchase an iPad, compared to students in middle and upper-income household brackets. Also, the value of research and information that students discover may be altered with the use of

the iPad. Furthermore, lesson preparation using an iPad might become labor-intensive for teachers because of the days and time needed for completing the task. Also, with regards to transfer of information, the device does not support flash drives, USB ports, and multi-tasking functions. In addition, some students noted Wi-Fi connection problems had caused delays and disruptions. Moreover, the limited power storage will impede the amount of operating time of the iPad. Furthermore, the iPad users still require a desktop or laptop computer, and publishers have not updated books as e-publications.

Even with iPad usage, the teacher-student connection will remain the foundation for technology use within the classroom because that is where education takes place. Although the iPad is an efficient tool in technology that can improve education in this hyper-connected world, iPad usage in the classroom would not eliminate the teacher's role as the educator. It merely enhances the educational process by allowing for a flexible learning atmosphere. The iPad transforms the classroom experience into a more collaborative learning atmosphere from the sage-on-a-stage method. The use of the iPad is effective in keeping students involved, and the achievement of such events will eventually differ on how the utilization of the iPad in the classroom changes instruction.

Theoretical Framework Application to Findings

Achievement goals are actions associated with acquiring class-level skills (Elliot, 1997). Likewise, Dweck (1986) specified two other types of goals, performance goals and learning goals. Elliot and Church (1997) stated that performance and learning goals are characteristic of achievement goals. While

performance-approach goals emphasize comparative competencies in specific settings, learning-approach goals focus on developing competence to be skillful and educated, which results in a more positive perspective.

The theoretical framework for this study is the Achievement Goal Theory, which suggests that people acquire information to assist in achieving their goals. The findings support this framework. All participants described personal experiences with achieving course objectives. The use of iPads in the classroom made such goal achievement more dynamic, efficient, and convenient. Due to their respective environments and experiences, or lack thereof, how students achieve learning varies. Students who exhibited higher achievement in learning the content expressed determination to accomplish their goals and used the iPad as a means to achieve those objectives.

A significant element of an achievement goal is the design of tasks and learning activities. To enhance the students' involvement with the use of the iPad, they engaged in different activities in the classroom. The task encompassed activities they used to make judgments about their ability, their willingness to apply effort, and satisfaction of their work completed. The students in this research experienced real fulfillment when using the iPad that involved a variety of activities that were of interest in their learning and completing course objectives.

Emerging Technologies

To initiate and pave the way for change, community colleges must provide instructors with emerging technologies, such as the iPad, that will improve their

curriculum. Today, many iPads have multifunctional capabilities that feature

tools previously offered on devices capable of only using a single function.

These functions involve audio recorders and players, the usage of digital

cameras for visual media, e-mail inboxes, and managing data. Social mobile

devices (SMDs), such as smartphones and tablets, now feature all such

functions combined within the device. Due to the extensive variety of its

functions, an iPad can also serve as a secondary device in the classroom. One

of the frequently used emerging technologies in Internet applications is the usage

of Voice over Internet Protocol (VoIP) to conduct interviews. To create the most

feasible alternative to face-to-face interviews, VoIP further advances the Internet

as a medium of modern technologies. Some newer technologies, along with

their functions, are Skype, which involves text messaging with time rejoinder in

real-time, and video conferencing. Academics are also using Facebook, which

contains images, text messaging and media. Also, Twitter is a new technology

that involves text messaging. In addition, Zoom is a new technology, which

includes an up-to-date initiative video communication, with a cloud platform for

audio and conferencing video, webinars, and chat.

Through these technologies, one can record both graphics and audio

effortlessly in the classroom from these simple applications downloaded onto the

iPad. The iPad can be used in the classroom to interact with the whiteboard.

The iPad can make 3D models with 123D Catch, and examine academic

subjects using the free Quizlet Application. Furthermore, the iPad can emulate a

game show style soundboard, and create photographic posters with applications

such as Diptic, and Pic Collage. Some additional uses of the iPad are managing music playlists, and can be used as a classroom organization and collaboration tool. The iPad can record podcasts with USB microphones, construct multimedia e-Books with Book Creator, and share students' learning involvements through Instagram.

The physical walls of their classroom should not limit students; in reality, the world is their classroom. It is vital for students to recognize the iPad as a beneficial tool to connect and work with the rest of the world.

Addressing Teacher Resistance

Teacher resistance is increasing in community colleges because of new technology, such as the iPad, and the methods that are advocated. Such resistance is visible in issues like fear of change, which includes applying new technology, such as the iPad, as an instructional and learning tool in the classroom. The iPad often results in fear and anxiety because using them involves adjustments in classroom methods and traditions, as well as the use of innovative technologies. The training is another form of teacher resistance that involves operating a new technology such as an iPad. Teachers must have a fundamental understanding of how to use this device. It is also necessary for teachers to grasp the execution of simple tasks, such as uploading files, copy and paste, and program installation. Teaching models, such as teacher resistance, include teacher's participation in training workshops and technology demonstrations. The teachers' teaching capabilities are enhanced through implementation of the models that they have mastered. The teachers' resistance

afterwards is diminished. Different types of programs used for instruction are one reason why learning is crucial for teachers to keep abreast of new technologies, such as using iPads in the classroom. In the learning process, educators and students become allies in technology incorporation.

Technology, such as the iPad, can also help change the long-established method of teachers being the only ones offering the knowledge, while students only learn. With new technologies, both the teacher and their students can collaborate to attain knowledge. The climate is also a part of the teacher resistance wherein teachers can conduct experiments and promote a positive learning atmosphere. Technical support, also addressed as an area of teacher resistance, is essential for teachers to have onsite. Technical support should be on-going when incorporating technology, such as the iPad, in their teaching.

Implications

The iPad's influence on student engagement has been confirmed in this study, even if on a small scale. The TRiO students' usage of the iPad in the computer classroom was continuous and resulted in limited problems during class. The iPad was used for complex critical thinking skills and teamwork. In addition, iPad usage had a positive impact on students' performance and students achieving course objectives.

There are significant problems in functionality between websites and systems designed for traditional computing and mobile applications for touch-screen navigation. Web-based systems that offer the promise of flexibility through regular laptops or personal computers are not necessarily user-friendly

with mobile computing devices, such as smartphones and Wi-Fi tablets like the iPad.

Further Research Recommendations

Further research and analysis are necessary for this topic. Professors can make adjustments that may increase the iPad's positive impact on TRiO students' engagement with the anticipated issues. Community college instructors may want to explore the following:

1. Incorporating the supply of iPads for students in their budget will assist the students in their performance: Instructors want wireless network available for students to complete their web-based class activities from different hot spots on campus.

2. Exploring additional research for iPads in the TRiO curriculum for students will contribute to further positive results: One must report on how functionality issues can interrupt the learning and instruction practices. For example, there is a functional contrast between point-and-click websites and their mobile styles. Functionality issues may be a short-lived issue, as many institutions, companies, and individuals are developing mobile-compatible versions of web pages and mobile applications.

3. Allowing for changes in functionality and personal preferences when appropriate, alternative or simultaneous access to traditional desktop computers were offered: As iPad and tablet computing devices are available in grade school, middle school, and high school, many colleges will, therefore, need to invest in these tools for all students, not just a limited group. The iPad will be the

tool of the future, and many younger children will not even require a computer: The iPad will be their way of learning.

Summary

This study generated four themes that answered the central research question and the two subset research questions. The theoretical framework focused on the participants' perceptions of personal achievement goals. The study participants, who enrolled at the community college site along with an administrator and teachers, provided responses that helped form the themes that emerged and answered the research questions. The four themes emerged from methodical coding, which included open coding, axial coding, and later placing all codes in an Excel table for the development of themes. All four themes contributed to the central research question: How did classroom experiences with iPads affect students' achievement as demonstrated through achieving course objectives?

The first theme, *accessibility* of the iPad in colleges, proves to engage students more fully, and the portability of the iPad extends their learning beyond the college. Also, iPads can increase organizational skills, motivation, self-directed learning, and independent and active learning (Fadel & Lemke, 2009). The second theme, *interaction in the classroom with applications and different programs*, indicates that the iPad can use applications to form an interactive whiteboard, appropriate for brainstorming. The purpose of the applications is to encourage students to capture and share their creative minds using the iPad with different programs (Johnson, 2012). The third theme, the immediate *benefits of*

iPads, involves engaging students and improving education efficiency and standards. Also, the iPad is quickly becoming an influential and widespread educational tool for classrooms. *Improved study skills*, with the aid of the iPad, is the fourth theme, which is significant to maintain in the classroom.

Students improved their study skills with the aid of the iPad when learning new information, time management, organization, and taking notes in the classroom (Johnson, 2012).

Along with the use of the internet, practical usage of the iPad is potentially linked to an increase of knowledge acquisition for students. Consequently, one could conclude there is a need for iPad use in many other classes throughout the community college. The iPads in the classroom provided college students with an additional option other than a desktop computer that could increase educational obtainment and directly remove the barriers for those who currently do not own Internet technologies.

Conclusion

Using iPads in the classroom will not only improve the way instructors teach their students, but it also has the potential to change the entire business of learning in colleges. Students from K-12 through community college are receiving iPads today. It is challenging for colleges to ensure that this substantial investment in iPads will take student learning to the next level, despite some distinct technical difficulties. Computers allow students to carry out media presentations instead of show-and-tell, to word process rather than type, to graph data electronically instead of drawing them on an easel pad, and to find information on the Internet instead of encyclopedias. To increase the

effectiveness of presentations, instructors depend on computers to do the same, as well as using interactive whiteboards. However, the iPad can do all these things.

Furthermore, it is portable, along with many other capabilities, and that alone might make all the difference. How can it change learning? Students can ask the instructor questions through the network, and collaborate with their peers. They can share and save what they learned with other students on the network, listen to lectures from experts and professors at iTunes U, and create a Prezi presentation regarding what they learned.

The use of the iPad gives students as much access to knowledge as the instructor, and maybe more. The students' perspectives do not have to be a robust uniform test framework or do not have to be limited by a biased and narrow textbook viewpoint. Instructors are no longer the sole presenters of content; the way instructors interact with students who are learning is indeed a paradigm shift. The iPad and other Wi-Fi tablet devices are appropriate in enhancing learning. The more technology influences teaching, performance, schedule, and pace, the greater the positive outcome. The higher level of iPad integration into a computer course and instructional framework, the probability the students will succeed.

In this qualitative study, the most substantial source of information and evidence regarding the benefit of the iPad in a community college computer class was the students' experiences. The research provided valuable information to the researcher and functioned as a method of endorsement of the participants

and their views. Also, in this qualitative study, the students were being observed and analyzed by a neutral third-party researcher. They were also creating their experience on their terms and gaining insights and knowledge that would teach them, their instructor, and their classmates.

The iPad's impact on student performance and course objectives on achievement goals is theoretically substantial. The iPad's relative newness may only limit its influence in community college as a tool for all students who enrolled in computer courses. Educators should take the lead in supporting the potential of modern technologies like the iPad to increase student achievement goals in community colleges, as more mobile devices are brought to campuses. Additionally, in 2018, educational requirements and styles are different. In this new millennium, with the use of iPads in the classroom, effective communication and digital literacy can assist students in achieving their goals.

Moreover, to guarantee they have a constructive, engaging learning experience, students are an essential part of the classroom. The technology, such as the iPad, is at the core of any instructional technique. Besides, when presenting and creating content that is interesting and applicable to students, training along with technology as a device supports instructors. In addition, education is vital to the students when they become active learners and are involved in their day-to-day class work.

Education has had to adapt due to the evolution of information and mobile technology. The goal of teachers to accept the integration of technology into the classrooms has been a challenging task due to the digital divide. Teachers are

integrating technology, such as the iPad, to overcome the challenges that they are facing in the classroom. For iPads to be more effective in the classroom, teachers and administrators will need to make an informed decision concerning their use.

References

Ali, A., & Murthy, R. (2010). The coordination between faculty and technical

support staff in updating computer technology courses—A case example.

Issues in Informing Science and Information Technology, *7*, 459-469.

Retrieved from

http://iisit.org/Vol7/IISITv7p459-469Ali827.pd

Alsufi, D. (2014). Evolution of classroom technology, the new way of teaching,

using iPads in schools, Bowling Green State University. Retrieved from

https://etd.ohiolink.edu/!etd.send_file?accession=bgsu1400153666&dispo

sition=inl

Alyahya, S. & Gall, J. E. (2012). IPads in education: A qualitative study of

students' attitudes and experiences. Paper presented at the world

conference on educational multimedia, Hypermedia and

telecommunications. Retrieved from https://www.learntechlib.org/p/40913

American Association of Community Colleges. (2012). Reclaiming the American

dream: A report from the 21st-century commission on the future of

community colleges. Washington, DC.

American Association of Community Colleges. (2016). About community

colleges. Retrieved from

http://www.aacc.nche.edu/AboutCC/Pages/default.aspx

Ames, C., (1992a). Classrooms: Goals, structures, and student motivation.

Journal Educational Psychology, 84, 261-271.

Anderman, E. M., & Patrick, H. (2012). Achievement goal theory,

conceptualization of ability/Intelligence, and classroom climate. *Handbook*

of Research on Student Engagement, 173-191. Retrieved from

https://link.springer.com/chapter/10.1007/978-1-4614-2018-7_8

Anderson, C. (2010). Presenting and evaluating qualitative research. American

Journal of Pharmaceutical Education, *74*(8).

Anderson, R., Anderson, R. Simon, B. Wolfman, S.A., Vandegrift, T. & Yasuhara,

K. (2004). Experiences with a tablet pc-based lecture presentation system

in computer science courses. In Proceedings of SIGCSE '04, Norfolk,

Vrginia.

Anna-Coultas, D. L. (2012). Laptops as instructional tools: Student perceptions.

Tech trends, 56(5), 34-41.

Arteaga, C., & Lucas, T. (2005). So many labs, so little time. *Proceedings of the*

33rd annual ACM SIGUCCS conference on User services. 192-196.

Retrieved from http://www.acm.org/dl

Aydemir, M., Küçük, S. & Karaman, S. (2012). Uzaktan eğitimde tablet bilgisayar

kullanımına yönelik öğrenci görüşlerinin incelenmesi. *Eğitim ve Öğretim*

Araştırmaları Dergisi, 1(4), 153-159. ISSN: 2146-9199.

Banister, S. (2010). Integrating the iPod Touch in k-12 education: Visions and

vices. *Computers in the Schools*, *27*(2), 121–131.

Bardzell, J. (2006). *Macromedia Dreamweaver 8 with ASP, ColdFusion, and*

PHP. Training from the source. Berkley, CA: Macromedia Press

Barnes, J. & Herring, D. (2011). Learning their way: Mobile devices in education. Paper presented at the Society for Information Technology &Teacher Education International Conference.

Baxter, P. & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, *13*(4), 544–559. Retrieved from http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf

Bayliss, M. L., Clipson, T. W., & Wilson, S. A. (2013). Faculty perceptions and policies of students' use of personal technology in the classroom. *Faculty Publications. Stephen F. Austin State University*, 118–137. Retrieved from http://scholarworks.sfasu.edu/cgi/viewcontent.cgi?article=1031&context=b usinesscom_facultypubs

Beins, B. C., (2001) Observational Research. In Michie, J. *Encyclopedia of Social Sciences*, 3, London: Fitzroy Dearborn.

Benham, H., Carvalho, G., & Cassens, M. (2014). Student perceptions on the impact of mobile technology in the classrooms. *Issues in Information Systems*, *15*(11), 141–150. Retrieved from http://iacis.org/iis/2014/101_iis_2014_141-150.pdf

Berg, D. (2013). Using the iPad in your academic workflow, and best iPad productivity tools for your classroom practices, *Community College of Philadelphia*, 1-10. Retrieved from http://faculty.ccp.edu/faculty/dsberg/pages/psych_faculty/dberg_content_fil es/Tutorials_Demos/NITOP_Presentation_2013.pdf

Bielec, J. A. (2010). What's in, what's out. *University Business*, *13*(S), 22-24.

Bradford, J. C. (2011). *Community colleges presidential transitions: Enhancing the process by understanding stakeholders' perceptions* (Doctoral dissertation, National Louis University). Retrieved from http://digitalcommons.nl.edu/cgi/viewcontent.cgi?article=1037&context=dis s

Brand, J. & Kinash, S. (2010) Pad-agogy: A quasi-experimental and ethnographic pilot test of the iPad in a blended mobile learning environment. Paper presented at the 27th Annual Conference of

Carnevale, A. P., & Rose, S. J. (2011). The Undereducated American. Washington, DC: Center for Education and the Workforce, Georgetown University. Retrieved from http://cew.georgetown.edu/

Center for Digital Education. (2004). One-to-one laptop initiatives: Providing tools for 21st century learners. *Center for Digital Education.* Folsom, CA: e.Republic.

Chappell, D. (2011). What is an application platform? Retrieved from http://www.davidchappell.com/writing/white_papers/What_is_an_Applicati on_Platform-Chappell.pdf

Clark, W.& Luckin, R. (2013). iPads in the Classroom. What the research says. Retrieved from https://knowledgeillusion.files.wordpress.com/2012/03/2013-ipads-in-the-classroom-v2.pdf

Coiro, J., Knobel, M., Lankshear, C., & Leu, D. J. (2008). Central issues in new literacies and new literacies research. In J. Coiro, M. Knobel, C. Lankshear,

and D. J. Leu (Eds.), *Handbook of Research on New Literacies*. Lawrence
Erlbaum Associates, Taylor & Francis Group, New York, USA, 1-21.

Concannon, F., Flynn, A., & Campbell, M. (2005). *What campus-based students
think about the quality and benefits of e-learning? 36*(3), 501-512.
Retrieved from
http://www.qou.edu/arabic/researchProgram/eLearningResearchs/whatCa
mpus.pdf

Crichton, S., Pegler, K., & White, D. (2012). Personal devices in public settings:
Lessons learned from an iPod Touch/iPad project. *Electronic Journal of e-
Learning*, *10*(1), 23-31. Retrieved from
http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ9694
33&site=ehost-live

Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed-
methods approaches. Los Angeles: Sage.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed
methods approaches. Los Angeles: Sage.

Dailey, B. (2017). Past and present attitudes about iPads use in the classroom.
Retrieved from https://commons.trincoll.edu/edreform/2017/05/past-
present-attitudes-towards-the-use-of-ipads-in-the-classroom/

Daccord, T. (2012). Five critical mistakes school make with iPads: And how to
correct them. *Edudemic Connecting Education Technology.* Retrieved
from http://www.edudemic.com/5-critical-mistakes-schools-ipads-and-
correct-them/

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of

computer technology: A Comparison of two theoretical models.

Management Science, *35*(8).

D'Andrade, R. (1991). The identification of schema in naturalistic data.

In M.J. Horowitz, *Person schemas and maladaptive interpersonal

patterns*, 279 - 301. Chicago, IL: University of Chicago Press.

Demeulle, L., Lowther, D. L., & Morrison, G. R. (1998). Integrating computer

technology into the classroom. Prentice Hall PTR.

Derting, T. L. & Cox, J. R. (2008). Using a tablet pc to enhance student

engagement and learning in an introductory organic chemistry course.

Journal of Chemical Education, 12(85). 1638-1643.

Devasagayam, P. R., Stark, N. R., & Watroba, R. (2013). Laptop technology in

classrooms: How student perceptions shape learning and satisfaction,

Atlantic Marketing Journal, 2(3), 13–23. Retrieved from

http://digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=1100&co

ntext=amj

Diemer, T. T., Fernandez, E., & Streepey, J. W. (2012). Student perceptions of

classroom engagement and learning using iPads. *Journal of Teaching and

Learning with Technology*, *1*(2), 13–25. Retrieved from

http://learn.coc.edu.au/wp-content/uploads/2014/05/3084-10092-1-PB.pdf

Domonell, K. (2014). Bridging the digital divide. *University Business*, 37–40.

Retrieved from

http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=7&sid=9bc418

80-104a-4b6d-9c17 - f68620f3cfbc%40sessionmgr4001&hid=4206

Dooley, K. E. (2007). Viewing agricultural education research through a

qualitative lens. *Journal of Agricultural Education JAE, 48*(4), 32–42.

doi:10.5032/jae.2007.04032

Dündar, H. & Akçayır, M. (2014). Implementing tablet pcs in schools: Students'

attitudes and opinions. *Computers in Human Behavior*, *32*, 40-46.

http://dx.doi.org/10.1016/j.chb.2013.11.020.

Dweck, C. S. (1986). Motivational processes affecting learning. *American

Psychologist, 41*(10), 1040-1048. Retrieved from

http://dx.doi.org/10.1037/0003-066X.41.10.1040

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation

and personality. *Psychological Review*, *95*, 256-273.

Dyer, C. (2013). Examining college students' perceptions of iPad usage on

motivation, organization, and cognitive skills. Retrieved from

https://etd.ohiolink.edu/rws_etd/document/get/bgsu1371738900/inline

Educause Webinar. (2011). "The future of mobile computing." Mobile Computing:

A 5 Day Sprint. Retrieved from

http://www.educause.edu/Resources/TheFutureofMobileComputing/22759

0

Eisner, E. W. (1991). The enlightened eye: Qualitative inquiry and the

enhancement of educational practice. New York, NY: Macmillan

Publishing Company.

Elliot, A. J. (1997). Integrating the "classic" and "contemporary" approaches to achievement motivation: A hierarchical model of approach an avoidance motivation. In M. L. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement*,*10*, 243-279. Greenwich, CT: JAI Press.

Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, *72*, 218–232.

Elliot. A. J., McGregor, H., Gable, S. (1999). Achievement goals, study strategies, and exam performance: A mediational analysis. *Journal Educational Psychology*, *91*, 549–563.

Erickson, F., & Gutiérrez, K. (2002). Culture, rigor, and science in educational research. *Educational Researcher*, *31*(8), 21-24. doi:10.3102/0013189X031008021

Erickson, F. (2011). Qualitative methods in research on teaching. In Y. Lincoln & N. K. Denzin (Eds.), The SAGE handbook of qualitative research, (43-59). Thousand Oaks, CA: SAGE.

Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers and Education, 59*, 423-435.

Fadel, C., & Lemke, C. (2009). Technology in schools: What the research says. Retrieved from http:// www. Metiri.com/pdfs/2009_technology_in_schools_what_research_says. 2009_technology__in_schools_what_research__sa ys.pdf

Fairlie, R. W. & Grunberg, S. H. (2014). Access to technology and the transfer function of community college: Evidence from a field experiment. *Economic Inquiry*, *52*(3), 1040-1059. https://onlinelibrary.wiley.com/doi/abs/10.1111/ecin.12086

Farghaly, A. (2018). Comparing and contrasting quantitative and qualitative research approaches in education: the peculiar situation of medical education. *Education in Medicine Journal*, *10*(1), 3-11. Retrieved from https://doi.org/10.21315/eimj2018.10.1.2

Foresman, C. (2010). The iPad goes to college this fall. *Ars Technical.* Retrieved from http://www.cnn.com/2010/TECH/mobile/07/26/ipad.university.ars/index.html

Fox, R., & Henri, J. (2005). Understanding teacher mindsets: IT and change in Hong Kong schools. *Educational Technology & Society*, *8*(2), 161–169.

Gentile, M. (2012). The importance of managing iPads in the classroom. *Education Digest*, 78, 11. Retrieved from https://eric.ed.gov/?id=EJ1002980

Geist, E. (2011). The game changer: Using iPads in college teacher education classes. *College Student Journal*, *45*(4), 758–769. Retrieved from http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=2&sid=e731090e-b26c-4505-a43d-5ce876581559%40sessionmgr4005&hid=4206

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, *8*(4), 597-607 http://www.nova.edu/ssss/QR/QR8-4/golafshani.pdf

Goldrick-Rab, S., Harris, D. N., Kienzi, G., & Mazzeo, C. (2009). Transforming America's community colleges: A federal policy proposal to expand opportunity and promote economic prosperity. *Brookings Report*, 1–4. Retrieved from http://www.brookings.edu/research/reports/2009/05/07-community-college-goldrick-rab

Goodwin, K. (2012). Use of tablet technology (iPads) in the classroom. *Department of Education and Communities, State of New South Wales, 1–43.* Retrieved from http://fad.teluq.ca/teluqDownload.php?file=2013/11/iPad_Evaluation_Sydney_Region_v2.pdf

Grundmeyer, T. A., (2012) "A qualitative study of the perceptions of first year college students regarding technology and college readiness." Graduate Theses and Dissertations. Retrieved from https://lib.dr.iastate.edu/etd/12599

Guess, A. (2007). "Students 'evolving' use of technology." *Inside Higher Ed.* Retrieved from http://www.insidehighered.com/news/2007/09/17/it

Hammarberg, K., Kirkman, M., & DeLacey, S. (2016). Qualitative research methods: when to use them and how to judge them. Human Reproduction, *31*(3), 498-501.

Handler, S. (2012). Technology and the classroom: Benefit or hindrance to social maturation? United States Military Academy. Retrieved from http://www.usma.edu/cfe/Literature/Handler_12.pdf

Hendricks, L., Wickersham, L., & Lumadue, R. (2012) The iPad in a freshman success seminar: A pilot study. *The Global e-Learning Journal*, *1*(3), 1-19.

Hermes, A. (2009). The history of computers in school. Retrieved from http://www.ehow.com/about_five491373_history-computers-school.html

Hew, K. F., & Brush, T. (2007). Integrating technology in k-12 teaching and learning: Current knowledge gaps and recommendations for future research. *Education Technology Research & Development*, *55*, 223-25

Hoepfl, M. C. (1997). Choosing qualitative research: A primer for technology education researchers, *Journal of Technology*, *9*(1). Retrieved from file:///G:/Hoepfl%20-%20Choosing%20Qualitative%20Research%20-%20A%20Primer%20for%20Technology%20Education%20Researchers%20*20*(1).pdf

Hollis, L. P. (2015). The significance of declining full-time faculty status for community college student retention and graduation: A correlational study with a Keynesian perspective. *International Journal of Humanities and Social Science*, *5*(3), 1-7.

Hollis, L. P. (2016a). The coercive community college: Bullying and its costly impact on the mission to serve underrepresented populations. *Emerald Group Publishing.*

Hollis, L. P. (2016). The importance of professor civility in a computer-based open-access environment for a minority-serving institution. *The Coercive Community College: Bullying and its Costly Impact on the Mission to Serve Underrepresented Populations* (65-82). Emerald Group Publishing Limited.

Hollis, L. P. (2018). Ghost-Students and the new wave of online cheating for community college students. New Directions for Community Colleges, *2018*(183), 25-34.

Horn, R. Jr. (2002). Understanding educational reform: A reference handbook. Santa Barbara, CA: ABC-CLIO, Inc.

Hunter, J. L. (2013). Exploring technology integration in teachers' classrooms in NSW public schools. Retrieved from https://researchdirect.westernsydney.edu.au/islandora/object/uws:18801/. . ./citation.pdf

Ifenthaler, D., & Schweinbenz, V. (2013). The acceptance of tablet-pcs in classroom instruction: the teachers perspective. *Computers in Human Behavior*, *29*(3), 525 -534.

Johnson, B. (2012). How the iPad can transform classroom learning: Using technology in the classroom. Retrieved from https://www.edutopia.org/blog/ipads-transform-classroom-ben-johnson

Johnson, L., Adams-Becker, S., Estrada, V. & Freeman, A. (2014). *NMC Horizon Report*: 2014 K-12 Edition. Austin,TX: The NewMedia Consortium.

Johnson, L., Adams, S. & Cummins, M. (2012). *NMC Horizon Report*: 2012 K–12 Edition. Austin, TX: The New Media Consortium.

Kaplan, A., Middleton M.J., Urdan,T,& Midgley,C. (2002b). Achievement goals and goal structures. In E. Midgley (Ed), In goals, goal structures, and patterns of adaptive learning. 21–55. Hillsdale, NJ: Erlbaum.

Karsenti, T. & Fievez, A. (2013). The iPad in education: uses, benefits, and challenges. Retrieved from

http://www.karsenti.ca/ipad/pdf/iPad_report_Karsenti-Fievez_EN.pdf

Kay, R. H. & Lauricella, S. (2014). Investigating the benefits and challenges of using laptop computers in higher education classrooms. *Canadian Journal of Learning and Technology*, *40*(2), 1–25. Retrieved from

file:///C:/Users/Delo/Downloads/831-3683-2-PB.pdf

Kennedy, G. E., Judd, T. S., Churchward, A., Gray, K. & Krause, K.-L. (2008). First year students' experiences with technology: are they really digital natives. *Australasian Journal of Educational Technology*, *24*(1), 108–122.

Khalil, S. M. (2013). From resistance to acceptance and use of technology in academia, *Open Praxis*, *5*(2), 151–163. Retrieved from

http://www.openpraxis.org/index.php/OpenPraxis/article/viewFile/5/33

Klopfer, E., Osterwell, S., Groff, J., & Hass, J. (2009). Using the technology of today in the classroom. *The Education Arcade, MIT*. Retrieved from

http://hub.mspnet.org/index.cfm/18746

Knott, C. I., Steube, G., & Yang, H. M. (2013). Technology in the classroom versus sustainability, *6*(1), *Contemporary Issues in Education Research*.

The Clute Institute. Retrieved

fromhttp://files.eric.ed.gov/fulltext/EJ1073226.pdf

Koile, K. & Singer, D. (2006). Development of a tablet-pc-based system to

increase instructor-student classroom interactions and student learning.

Retrieved from http://projects.csail.mit.edu/clp/publications/documents/

Kozleski, E. B., Artiles, A. J., McCray, E., & Lacy, L. (2014). Equity challenges in

the accountability age: Demographic representation and distribution in the

teacher workforce. In P. Sindelar, E. McCray, M. Brownell, & B.

Lignugaris/ Kraft (Eds.), *Handbook of research on special education*

teacher preparation, 113-126. New York, NY: Routledge.

Lam, P., Lee, J., Chan, M. & McNaught. (2011). Students' use of eLearning

strategies and their perceptions of eLearning usefulness. Global Learn,

2011, *1,* 1379–1388.

Lambert, M. (2012). *A beginner's guide to doing your education research project*.

Thousand Oaks, CA: Sage.

Lahmers, A. & Tressler, C. (2015). Ipad-Enabled curriculum in a graduate

program. Retrieved from https://er.educause.edu/articles/2015/10/ipad-

enabled-curriculum-in-a-graduate-program

Lane Community College. (2018). TRiO/TRiO STEM. Retrieved from

https://www.lanecc.edu/TRiO

Li, Q. (2010). A meta-analysis of the effects of computer technology on school

students' mathematics learning. *Educational Psychology Review. 22*(3),

215-243. Retrieved from https://link.springer.com/article/10.1007/s10648-010-9125-8

Li, S. C., & Pow, J. W. C. (2011). Affordance of deep infusion of one-to-one tablet-PCs into and beyond classroom. *International Journal of Instructional Media, 39*(4), 319-325.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Beverly Hills, CA: Sage.

Lindbeck, R., & Fodrey, B. (2011). Integrating technology into the college classroom: Current practices and future opportunities. *National Social Science Association, 1*(1), 1–8. Retrieved from http://www.nssa.us/tech_journal/volume_1-1/vol1-1_article5.htm

Lindroth, T., Lundin, J. & Svensson, L. (2013). Laptops in classroom interaction: The dynamic reach of the lap toped situation. International Conference on Educational Technologies. Retrieved from http://files.eric.ed.gov/fulltext/ED557180.pdf

Liu, Y., Han, S. & Li, H. (2010). Understanding the factors driving m-learning adoption: a literature review. Campus-Wide Information Systems, *27*(4), 210–226.

Livingstone, S. (2012). Critical reflections on the benefits of ICT in education. Oxford Review of Education, *38*(1), 9–24.

Luo, H. (2011). Qualitative Research on Educational Technology: philosophies, methods and challenges. *International Journal of Education. 3*(2), 1-16. Retrieved from

http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.872.503&rep=re

p1&type=pdf

McCrea, B. (2010). Measuring the iPad's Potential for Education. *The Journal*.

Retrieved from https://thejournal.com/articles/2010/01/27/measuring-the-

ipads-potential-for-education.aspx

McCusker, K. & Gunaydin, S. (2014). Research using qualitative, quantitative or

mixed methods and choice based on the research, *30*(7), 537–542,

Reprints and permissions: agepub.co.uk/, *Journals Permissions*, doi:

10.1177/0267659114559116 prf.sagepub.com. Retrieved from

file:///G:/McCusker%20-

%20Research%20using%20qualitative%20quantitative%20or%20mixed%

20methods%20(1).pdf

Maehr, M., Nicholls, J.G. (1980). Culture and achievement motivation: A second

look. In N. Warren (Ed), In studies in cross-cultural psychology, 221–267.

New York: Academic.

Magilvy, Joan, & Thomas, E. (2009). A first qualitative project: Qualitative

descriptive design for novice researchers. *Journal for Specialists in

Pediatric Nursing*, *14(*4*),* 298-300.

Margolin, S.J., Driscoll, C., Toland, M.J., & Kegler, J.L., (2013). E-readers,

computer   screens, or paper: does reading comprehension change

across media platforms? *Applied Cognitive Psychology*, *27*, 512-519.

Mathis, J. (2010) The iPad's School Day: Apple's tablet hits the classroom.

Macworld; Dec. 2010, *27*(12), 28.

Maxwell, J. A. (2005). *Qualitative research design: An interactive approach* (2nd Ed. ed.). Thousand Oaks, CA: Sage.

Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, students motivation, and academic achievement. *Annual Review Psychology*, *57*, 487-503, doi: 10.1146/annurev.psych.56.091103.070258. Retrieved from file:///E:/anual%20review%202006.pdf

Merriam, S. B. (2002). Qualitative research in practice: Examples for discussion and analysis. San Francisco: Jossey-Bass.

Merriam, S. B. (2009). Qualitative research: A guide to design and implementation. San Francisco: Jossey-Bass.

Midgley C. (2002). Goals, goal Structures, and patterns of adaptive learning. Hillsdale, NJ: Erlbaum.

Miller, R. B., Greene, B. A., Montalvo, G. P., Ravindran, B., & Nichols, J. D. (1996). Engagement in academic work: The role of learning goals, future consequences, pleasing others, and perceived ability. *Contemporary Educational Psychology*, 21, 388-422.

Moeller, B., & Reitzes, T. (2011). Integrating technology with student-centered learning. Education Development Center, Inc. (EDC). Retrieved from http://www.nmefoundation.org/getmedia/befa9751-d8ad-47e9-949d-bd649f7c0044/integrating

Moerschell, L. (2009). Resistance to technological change in academia. *Current Issues in Education, 11*(6), 1–10. Retrieved from http://search.ebscohost.com.library.capella.edu

Montrieux, H., Vanderlinde, R., Schellens, T., De Marez, L. (2015). Teaching and Learning with Mobile Technology: A qualitative explorative study about the Introduction of tablets devices in secondary education. PLoS ONE10(12): e0144008. Retrieved https://doi.org/101371/journal.phone.0144008.

Morningstar, M. E., Shogren, K. A., Lee, H., & Born, K. (2015). Preliminary lessons about supporting participation and learning in inclusive classrooms. Research and practice for persons with severe disabilities, *40*, 192-210. doi:10.1177/1540796915594158

Mueller, P. A. (2014). Take notes by hand for better long-term comprehension. *Association for Psychological Science Journal.* Retrieved from https://www.psychologicalscience.org/news/releases/take-notes-by-hand-for-better-long-term-comprehension.html

Murdock, E. (2004). The history of computers in education. Retrieved from http://www.csulb/edu/~murdock/hstofcs.html

Murphrey, T. (2010). A case study of e-learning: Using technology to create and facilitate experiential learning, *The Quarterly Review of Distance Education, 11*(4). Retrieved from http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=9&sid=48bb43 aa-be5a-419f-bded-14fe7cd12623%40sessionmgr4003&hid=4114

Murray, O.T. & Olcese, N.R. (2011). Teaching and learning with iPads, ready or not? *Tech Trends*, *55*(6), 42–48.

Nicholls, J. G. (1984). Achievement motivation: conception of ability, subjective experience, task choice, and performance. *Psychology Review,* 91, 328–346.

Ohrtman, M., Cronin, S., Torgerson, E., Thuen, M., & Colton, E. (2016). Perceptions of effectiveness of school counselors with former graduates in a TRiO college program. *Journal of Applied Research on Children: Informing Policy for Children at Risk, 7*(1). Retrieved from https://files.eric.ed.gov/fulltext/EJ1188513.pdf

Olivier, W. (2005, November). Teaching mathematics: Tablet pc technology adds a new dimension. Reform, Revolution and Paradigm Shifts in Mathematics Education Conference, 25 November-1 December 2005, Johor Bahru, Malaysia.

Oreg, S. (2006). Personality, context, and resistance to organizational change. *European Journal of Work and Organizational Psychology*, *15*(1), 73–101.

Pahlavan, K., & Krishnamurthy, P. (2002). Principles of wireless networks: A unified approach. Upper Saddle River, NJ: Prentice Hall.

Pamuk, S., Çakır, R., Ergun, M., Yılmaz, H.B. & Ayas, C. (2013). Öğretmen ve öğrenci bakış açısıyla tablet pc ve etkileşimli tahta kullanımı: fatih projesi değerlendirmesi. *Kuram ve Uygulamada Eğitim Bilimleri*, *13*(3), 1799-1822.

Panopto. (2017). Seven unique flipped classroom models. Retrieved from

    https://www.panopto.com/blog/7-unique-flipped-classroom-models-right/

Patton, M. Q. (2002). Qualitative evaluation and research methods (3rd ed.).

    Thousand Oaks, CA: Sage Publications, Inc.

Prensky, M. (2011). In the 21st-century university, let's ban (paper) books.

    Chronicle of Higher Education, 58(13), A30-9.

Rawat, K.S., Elahi, M. & Massiha, G.H. (2008, November). A pilot project in

    evaluating the use of tablet-pcs and supporting technologies in sophomore

    electronic technology courses. *Proceedings of the 2008 IAJC-IJME*

    International Conference, Nashville, TN, USA.

Ravitch, S. M., & Carl, N. M. (2016). Qualitative research: Bridging the

    conceptual, theoretical, and methodological. Thousand Oaks, CA: Sage.

Redlich-Amirav, D. & Higginbottom, G. (2014). New emerging technologies in

    Qualitative Research. *The Qualitative Report*, *19*(26), 1-14. Retrieved from

    https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1212&context=tqr

Riley, S. (2007). Science, math, and technology. Technology & learning, *28*(4),

    35-36. Retrieved from Education Research Complete database.

Roberts, Cynthia. (2008). "Implementing Educational Technology in Higher

    Education: A Strategic Approach." *The Journal of Educators Online*, *5* (1).

    Retrieved from

    http://www.thejeo.com/Archives/Volume5Number1/RobertsPaper.pdf.

Rola, M. (2002). "Building IT into lesson plans," Computing Canada, 28, 28.

Ryan, G. W., & H. Bernard, R. (2003). Techniques to identify themes in qualitative data. *Field Methods*, *15*(1):85-109.

Schafer, P. (1998). Culture: Beacon of the future. Westport, CT: Praeger.

Schacter, J. (2011). The impact of education technology on student achievement: What the most current research has to say. Santa Monica, CA: Milken Exchange on Education Technology.

Schifter, C. (2008). A brief history of computers, computing in education, and computing in Philadelphia Schools. Retrieved from http://www.igi-global.com/viewtitle.aspx?titleid=23767&sender=025b114d-3e97-42be-bef4-e1bca9fb6822

Schiler, J. (2003). Working with ICT: Perceptions of Australian principals, *Journal of Educational Administration*, *41*(3), 171-185.

Shogren, K. A., Gross, J. M. S., Forber-Pratt, A. J., Francis, G. L., Satter, A. L., Blue-Banning, M., & Hill, C. (2015). The perspectives of students with and without disabilities on inclusive schools. Research and practice for persons with severe disabilities, *40*, 243-260. doi:10.1177/1540796915583493

Shuler, C., Levine, Z. & Ree, J. (2012). iLearn II: an analysis of the education category of Apple's app store. Paper presented at the New York: The Joan Ganz Cooney Center at Sesame Workshop.

Skipton, C., Matulich, E., Pappa, R., & Stepro, J. (2006). Moving from Dumb to Smart Classroom: Technology Options and Implementation Issues.

Journal of College Teaching and Learning, *3*(6). Retrieved from

https://cluteinstitute.com/ojs/index.php/TLC/article/view/1706

Stokes, D. E. (1997). Pasteur's quadrant: Basic science and technological

innovation. Washington, DC: Brookings Institution Press.

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory

procedures and techniques. Newbury Park, CA: Sage Publications, Inc.

Sultan, S. & Hussain, I. (2012). A study on achievements goals determining

learning strategies of undergraduate college students. *Journal of*

Educational Research, *15*(1), 39-46.

 The Apple Corporation. (2018). iPad 9.7 specifications. Retrieved from

https://www.apple.com/ipad-9.7/specs/

U. S. Department of Education. (2017). Federal TRiO Programs. Retrieved from

https://www2.ed.gov/about/offices/list/ope/TRiO/index.html

University of Utah. (2018). TRiO programs. Retrieved from

https://TRiO.utah.edu/about/index.php

Vu, P. (2013). An Inquiry into how iPads are used in classrooms. Retrieved

from http://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=1708&context=

dissertations

Wardlow, L. (2014). How technology can boost student engagement. *Research &*

Innovation Network, 1. Retrieved from

http://researchnetwork.pearson.com/learning-science-

technology/technology-can-boost-student-engagement

Waters, J. K. (2010) Enter the iPad (or not?) *T. H. E. Journal*, *37*(6), 38–45.

Wieder, B. (2011). iPads could hinder teaching, professors say. *Chronicle of Higher Education.* Retrieved from http://chronicle.com/article/iPads-for-College-Classrooms-/126681/

Willocks, B. & Redmond, P. (2014). Evaluatinga1-to-iPad project: Beyond rose colored glasses. *Paper presented at the Conference Proceedings of the Australian Computers in Education Conference 2014.* Retrieved from http://acec2014.acce.edu.au/sites/2014/files/2014ConfProceedingsFinal.pdf

Winter, G. (2000). A comparative discussion of the notion of validity in qualitative and quantitative research. *The Qualitative Report*, *4*(3-4). Retrieved from http://www.nova.edu/ssss/QR/QR4-3/winter.html

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.

Yoon, C. & Sneddon, J. (2011). Student perceptions of effective use of tablet pc recorded lectures in undergraduate mathematics courses. *International Journal of Mathematical Education in Science and Technology*, *4*(42), 425-445. doi: 10.1080/0020739X.2010.543165.

Young, J. R. (2004). "When good technology means bad teaching." *The Chronicle of Higher Education*, *51*(12), A31. Retrieved from http://chronicle.com/article/When-GoodTechnology-Means-Bad/10922

Yukl, G. (2009). Leading organizational learning: Reflections on theory and Learning. *The Quarterly*, *20*, 49-53.

Appendix A

INFORMED CONSENT FORM

Dear Potential Study Participant:

You are invited to participate in a study of experiences of TRIO Students enrolled at Bill Rice Community College (BRCC). The purpose of this qualitative case study was to show how TRiO Community College students think iPad help in achieving course objectives at Bill Rice Community College. Learning as demonstrated by achieving outcomes is significant predictors of performance and effort for learning (Miller, et al., 1996). The study is being conducted by Deloris Rice Smothers of Morgan State University. You were selected as a possible participant in this Achievement Goal Theory Study because you were identified as TRiO Students enrolled at BRCC between fall 2016 to spring 2017.

If you decide to participate, I will ask that you participate in an information gathering session that will include a semi-structured interview via Skype or a similar program such as Adobe Connect. The interview should last between 35-60 minutes. The conversational topics may include personal information surrounding your experience while attending Bill Rice Community College. The information will help other researchers better understand students similar to you based on your experiences.

Each participant will be given an individual identity code. Any information that is obtained in connection with this Achievement Goal Theory Study and that can be identified with you will remain confidential and will be disclosed only with your permission.

Your decision whether or not to participate will not prejudice your future relation with Bill Rice Community College or Morgan State University. If you decide to participate, you are free to discontinue participation at any time without prejudice.

If you have any questions, please do not hesitate to contact us. If you have any additional questions later about the study, please contact me, Deloris Rice Smothers at 256-508-3460 or Dr. Leah Hollis at 443-885-1469 who will be happy to answer them. If you have further administrative questions, you may contact the MSU IRB Administrator, Dr. Edet Isuk, at 443-885-3447.

You will be offered a copy of this form to keep.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above and have decided to participate. You may withdraw at any time without penalty or loss of any benefits

to which you may be entitled after signing this form should you choose to discontinue participation in this Achievement Goal Theory Study.

_____   _____

Signature   Date:

_____   _____

Signature of Witness (If appropriate)   Signature of Investigator