2015

Evaluating Faculty and Student Perceptions of Blended Education to Determine and Measure Student Satisfaction in a Blended Learning Program with At-Risk High School Students

Daquia J. McCoy
Lynn University

EVALUATING FACULTY AND STUDENT PERCEPTIONS OF BLENDED EDUCATION TO DETERMINE AND MEASURE STUDENT SATISFACTION IN A BLENDED LEARNING PROGRAM WITH AT-RISK HIGH SCHOOL STUDENTS

By

Daquia J. McCoy

A Dissertation submitted in partial fulfillment of the requirements for the Degree of

Doctor in Education

Doctoral Program in Educational Leadership at Lynn University,
College of Education

Lynn University

2015

COPYRIGHT PAGE

ABSTRACT

In recent years, the rapid development of information and communication technology has facilitated a convergence between face-to-face and technology-mediated learning environments. In addition, the impact of learning environments in relation to learning outcomes has constantly been explored by researchers and is a constant concern amongst teachers as they seek to improve student learning outcomes in their classrooms. According to a 2003 National Research Council report on motivation (i.e., student satisfaction), lack of motivation is a real and pressing problem in the traditional classroom. Upwards of 40 percent of high school students are chronically disengaged from school.

Nonetheless, there is a progressive frontrunner to traditional education that has made noteworthy strides towards increasing student satisfaction and achievement. This frontrunner is known as blended learning education. Blended learning offers the advantages of online learning with the effective aspects of traditional education, such as face-to-face interaction. For at-risk learners - students and school-age youth who are under-performing academically, may have learning disabilities, emotional or behavioral problems, or may be deliberate or inadvertent victims of the behavioral problems of others - blended learning is an important, and transformational tool in maintaining student satisfaction and increasing student achievement in an alternative learning environment. In regards to student satisfaction, this is considered an important factor in measuring the quality of blended learning.

The purpose of this action research study was to (a) assess student satisfaction in relation to student achievement in a blended learning environment with at-risk high school students, and (b) evaluate faculty and student perceptions of blended learning education. The study consisted of a mixed-methodology, non- experimental, research design. The accessible population for this study consisted of at-risk high school students (15 – 20 years old) and eight faculty members (i.e., certified teachers) at an alternative charter school in the southern region of the Palm Beach County School

District. For qualitative purposes, the data collection consisted of student and faculty surveys complemented by individual and focus group faculty interviews based upon survey responses. The student survey contained LIKERT scale questions based upon five student satisfaction factors: instructor facilitation, ease of technology, level of interactivity, course management issues, and instruction. In addition individual and focus group faculty interviews allowed faculty participants to further expand upon the written response survey questions.

For quantitative purposes, data collection involved analyzing participant's final scores in completed courses throughout the school year. Based upon the percentages of the final scores (utilizing a grading scale of 0-59% = F, 60 – 69% = D, 70 – 79% = C, 80 – 89% = B, 90 – 100% = A), student achievement can be determined by the number of passing scores (70% or higher) that the student participant attained as their final mark in the course. Provided a student participant responds positively on the Blended Course Student Survey, then their final course grades should also reflect positively with final course grades of 70% and above; indicating a successful correlation between student satisfaction and student achievement utilizing blended learning as an alternative education for at-risk students.

ACKNOWLEDGEMENTS

GOD, his Son, and the Holy Ghost (aka The Trinity) - We knew from the start we would pursue this venture and it was only through your strength, guidance, and faith that we completed this journey. Thank you.

To my mother, father, and sister – Your support has been monumental and integral to my success. If loving you is wrong, I don't want to be right.

Christopher Hardy – We began this journey in college and still continue strong to this day. I love you; respect you, and thank you for traveling this journey with me. It was a long and crazy ride but well worth it. Thank you.

Faith A. Hardy – My daughter, my love, my heartbeat.

Margaret McCollum and Elicia Hardy – You ladies were pivotal in making my dream a reality and I truly thank you; more than you'll ever know.

Diabetes (Type 1) – You were certain I was going to fail. I relapsed constantly and was sent to the hospital more times than I can remember. Whenever I progressed two steps forward, you sent me five steps backwards. Nonetheless, I proudly walked across the stage and received my degree. I conquered you and still stand to this day.

Dr. Joseph Melita – I truly thank you for being my chair and staying with me throughout this process. You guidance and support never faltered and kept me focused every step of the way. Thank you.

Dr. Korynne Taylor-Dunlop –You stepped in during a critical time and provided great direction, feedback, and clarity. Thank you

Dr. Kia Allen – Your support was instrumental in the completion of this dissertation and I thank you immensely.

Dr. Weigel and Lynn University – You provided a platform that enhanced my learning and knowledge of what it means to be an effective leader in our ever-changing society.

DEDICATION

This dissertation is dedicated to my mother, Mrs. Jocynthia McCoy and my best friend, Mr. Christopher Hardy. You are loved immensely and beyond the realm of this world…thank you.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I: INTRODUCTION

In recent years, the rapid development of information and communication technology has facilitated a convergence between face-to-face and technology-mediated learning environments. In addition, the impact of learning environments in relation to learning outcomes has been explored by researchers and is a constant concern amongst teachers as they seek to improve student learning outcomes in their classrooms. In addressing these issues at the primary and secondary levels of education (i.e., K-12), educators are re-assessing the tradition teaching methodology known as face-to-face instruction and why it is ineffective in solving the issues of maintaining student satisfaction , increasing academic achievement, and producing actively engaging learning environments. As Broughton and Kuzu (2010) claim, traditional instruction is not effective because it is deeply teacher-centered and based on the "traditional view of education, where teachers serve as the source of knowledge while learners serve as passive receivers" (p.36). This traditional method of teaching puts the responsibility for teaching and learning mainly on the teacher and is believed if students are present in the lesson, listen to the teacher's explanations, and completes rote examples, they will be able to apply the learned knowledge appropriately. This method has historically dominated education in the K-12 sector, however, there have been recently expressed concerns and a call to action by United States Secretary of Education Arne Duncan regarding the traditional pedagogical methods employed in educating the students of the twenty-first century. During a policy address at the American Enterprise Institute, Duncan declared that the factory model of education is the wrong model for the 21st century and stated that "Today, our schools must prepare all students for college and careers – and do far more to personalize instruction and employ the smart use of technology" (2013).

To address Mr. Duncan's concerns, a progressive alternative to the traditional learning method has emerged as a front-runner and viable contender to face-to-face education, employing a modern-based teaching practice utilizing web-based technology. This alternative contender is referred to as blended learning education. As described by Thorne (2003) blended learning education is "a way of meeting the challenges of tailoring learning and development to the needs of individuals by integrating the innovative and technological advances offered by online learning with the interaction and participation offered in the best of traditional learning."

Proponents of blended learning advocate its effectiveness in potentially eliminating barriers while providing increased convenience, flexibility, customized learning, and feedback over a traditional face-to-face experience (Hackbarth, 1996; Harasim, 1990; Kiser, 1999; Matthews, 1999; Swan et al., 2000). This unique learning involves an intentional shift to online instructional delivery that includes improvements to teacher access to data, the potential to inform instruction, and greater student productivity from the standpoint of increased learning opportunities and improved student outcomes (Ark et al, 2013). Blended learning also provides a flexible platform which helps in addressing the diversity seen in students' learning styles via the integration of interactive online techniques with more traditional teaching strategies (Garrison & Kanuka, 2004; Holley & Dobson, 2008). In essence, blended learning education requires rethinking how class is structured, how time is used, and how limited resources are allocated to service the educational needs of all students in the classroom, specifically, at-risk learners. For at-risk learners - students and school-age youth who are under-performing academically, may have learning disabilities, emotional or behavioral problems, or may be deliberate or inadvertent victims of the behavioral problems of others - blended learning is an important, and sometimes transformational tool in maintaining student satisfaction and increasing student achievement in an alternative learning environment.

Purpose of study

The purpose of this action research study is to (a) determine and measure student satisfaction in a blended learning program with at-risk high school students and (b) assess faculty and student perceptions of blended learning education.

Statement of the Problem

In the face-to-face learning environment, this traditional method of instruction has not been effective in maintaining student satisfaction and was considered a significant contributor to the national high school drop-out rate of eighteen percent in 2012 (U.S. Dept. of Education, Status Dropout Rates, 2014). The Sloan Consortium defines student satisfaction as, "Students are successful in the learning and are pleased with their experience" (J. C. Moore, 2009). In assessing the compelling reasons for interest in student satisfaction, the Sloan Consortium's "Five Pillars of Quality Online Education" declares student satisfaction to be the most important key to continuing learning. It reflects learners' evaluation of the quality of all aspects of the educational program (Sloan, 2011). In a similar definition, Sweeney and Ingram (2001) define satisfaction as, "the perception of enjoyment and accomplishment in the learning environment." Additionally, there is evidence that student satisfaction is positively related to retention and student achievement in their coursework (Booker & Rebman, 2005).

Student satisfaction has steadily declined in face-to-face environments because this traditional learning incorrectly assumes that for every ounce of teaching there is an ounce of learning by those who are taught. In most schools, memorization is mistaken for learning and most of what is remembered is retained for a short period of time, only to be quickly forgotten. As the predominant learning method for classroom instruction, face-to-face learning relies mainly on lecture presentation, question and answer, and assigned readings inside and outside the classroom (Al-Qahtani & Higgins, 2012). Such teaching becomes monotonous and hinders

the students' ability to actively engage in their learning, thus producing mediocre work quality and limited engagement in the traditional classroom.

Reporting on satisfaction in a blended learning environment, Wu, Tennyson, and Hsia (2010) define satisfaction as the sum of student feeling and attitude that results from aggregating all the benefits that a student hopes to receive from blended learning environment system. To address the learning needs of at-risk learners whom are resistant to the traditional education, blended learning offers an alternative education and learning environment to better service their educational needs. According to White and Kochhar-Bryant (2005) alternative education is defined as programs, schools, and districts serving at-risk school-aged not succeeding in the regular public school environment. Alternative education provides a second chance for at-risk students to attain an education, explore additional opportunities to achieve academically, and develop socially in a different setting that varies from the traditional school. In addition, alternative education programs actively engage at-risk students and their learning process, increase their student satisfaction in an alternative educational environment, and ultimately direct them onto a successful path to obtaining a standard high school diploma. Overall, blended learning education offers a student-centered classroom that creates an in-depth learning environment and deeply engaging experience so that each student can actively participate in his or her own learning experience. .

Research questions

The following research questions are considered for this study:

1. How is student satisfaction measured in a blended learning environment with at-risk high school students?
2. What factors influence student satisfaction in a blended learning environment with at-risk high school students?

Background

Blended learning, as defined by Bonk and Graham (2007), is a combination of online and face-to-face instruction. This alternative learning is part of the ongoing convergence of two archetypal learning environments. On the one hand, we have the traditional face-to-face learning environment that has been around for centuries. On the other hand, we have distributed learning environments that have begun to grow and expand in exponential ways as new technologies have expanded the possibilities for distributed communication and interaction. According to Smith & Dillon (1999), blended learning combines multiple delivery media that are designed to complement each other and promote learning and application-learned behavior. Throughout K-12 education, blended education has had an influential impact on student satisfaction, student learning, and student achievement. Blended learning is not restricted by the school day or school year, not confined to the walls of a classroom, incorporates multi-faceted instruction, and is self-paced. Based on the literature that exists, Staker (2001, p8-9) provides a deeper understanding of blended learning education by detailing six blended learning program models implemented in alternative and traditional schools:

- Model 1: Face-to-Face Driver
- Model 2: Rotation
- Model 3: Flex
- Model 4: Online Lab
- Model 5: Self-Blend
- Model 6: Online Driver

The first blended learning model is the Face-to-Face Driver and relies on face-to-face teachers to deliver most of their curricula to their students in a lecture format inside the classroom. This particular model allows the teacher to deploy online learning on a case-by-case basis to supplement or remediate, often in the back of the classroom or in a technology lab. The second blended learning model is the Rotation format in which students rotate on a fixed schedule between learning online in a one-to-one, self-paced environment and sitting in a

classroom with a traditional face-to-face teacher. This format also involves a split between the two (face-to-face and online) and in some cases, between remote (outside the brick-and-mortar building, at home) and onsite. The face-to-face teacher also oversees the online work so the curriculum is used supplementary and not as the sole instructional method of delivery. The third model of blended learning, known as Flex learning, features an online platform that delivers most of the curricula and the teacher-of-record provides on-site support on a flexible and adaptive as-needed basis through in-person tutoring sessions and small group sessions. One must note there is no whole class delivery of instruction with this approach; rather individualized attention is given to the student in their course of study. The fourth model of blended learning is the Online Lab. This model characterizes programs that rely on an online platform to deliver the entire course but in a brick-and-mortar lab environment. The online curriculum usually embodies online teachers with paraprofessionals whom supervise student work yet do not offer content expertise in the brick-and-mortar environment. Unique to the online lab model is that students whom participate in this model also take traditional courses and have typical block schedules that consist of learning in a general education classroom.

The fifth blended learning model that exists is known as Self-Blend. This model focuses on students who choose to take one or more courses online to supplement their traditional school's catalog. The online learning is always remote, but the traditional learning is in a brick-and-mortar school. In addition, all supplemental online schools that offer a la carte courses to individual students facilitate self-blending. Finally, the sixth model of blended learning, the Online Driver, involves an online platform and teacher that deliver all curricula online. Students work remotely for the most part and face-to-face check-ins are optional and other times required and program participation at a brick-and mortar place is primarily used for extracurricular activities.

Blended learning is strongly advocated by educators, administration and districts as a positive tool in increasing student satisfaction, student achievement, and learning outcomes in the classroom. It is established as a progressive method of alternative instructional education and currently there are six influences that define blended learning education. The first influence is *engagement*. Engagement improves student motivation from engaging content and game-based strategies that keeps the student actively involved in their learning throughout the lesson. The second influence is *time*. In a blended learning environment the learning day and year is extended, allowing students to learn what they learn when they learn best. The third influence is *location*. Blended learning provides the option of anywhere anytime learning, creating a new world of opportunity beyond the classroom. The fourth influence is *pacing*; allowing students to progress at a rate that is comfortable for them. The fifth influence involves incorporating *content* that is rich, deep, updated, and correlates to state and national learning standards. Lastly, the sixth influence is *student ownership*. With blended learning, students have more autonomy over what they learn and the ability to demonstrate their learning through project-based assignments that are interactive and engaging; a key component in knowledge retention and comprehension in the blended learning environment.

In determining student satisfaction in a blended learning environment, particularly with at-risk students, Bollinger and Martindale (2004) have identified three key factors central to student satisfaction: the blended learning instructor, technology, and interactivity n the blended classroom. Other factors, such as course management issues and instruction, also contribute toward students' satisfaction with blended education. The first and critical factor in maintaining and increasing student satisfaction in a blended learning environment involves the instructor (Finaly-Neumann, 1994; Williams & Ceci, 1997). Student satisfaction is highly correlated with the performance of the instructor, particularly with his or her availability and response time (DeBourgh, 1999; Hiltz, 1993). Instructors must be available for consultation with students and,

in addition, must be flexible in teaching that is time and plan independent (M. G. Moore & Kearsley, 1996). In addition, the instructor not only becomes a facilitator of learning, but also a motivator for the at-risk student. To keep learners involved and motivated, feedback on assignments must be given in a timely manner and communication must be on a regular basis so as to prevent high levels of frustration among students (Hara & Kling, 2003). The second factor in maintaining and increasing student satisfaction in a blended learning environment concerns the technologies utilized in the blended classroom. Technologies used in online and blended learning situations have the potential to enrich the learning experience of the at-risk student; to do more than what can be done the traditional face-to-face environment (Smart & Cappel, 2006). In addition, access to technology is another considerable factor influencing student satisfaction when students have access to reliable equipment and adequate technical support (Bower & Kamata, 2000). Online learners must be familiar with the technology used in the course in order to be successful (Belanger & Jordan, 2000). If students become frustrated with technology in the course, they will experience lower satisfaction levels (Chong, 1998; Hara & Kling, 2003) and a decrease in motivation to perform their academic responsibilities. The third factor in maintaining and increasing student satisfaction in a blended learning environment involves the level of collaboration (i.e., interactivity) in the blended classroom. Learning environments in which social interaction and collaboration are allowed and encouraged lead to positive learning outcomes (American Psychological Association, 1997) and collaborative learning tools such as group work and immediate feedback can improve student satisfaction in the online learning environment (Bonk & Cunningham, 1998; Gunawardena & Zittle, 1998). Not only are students able to share viewpoints and discuss them with one another in a blended environment, this type of environment allows for social interaction and creates meaningful, active, learning experiences (Bonk & Cunningham, 1998); a key indicator to maintaining overall student satisfaction in the blended classroom. The fourth factor, course management, includes access to other resources,

such as course textbooks, libraries, and technical support, all which are critical in maintaining student satisfaction in the blended learning environment. The fifth factor in maintaining and increasing student satisfaction in a blended learning environment correlates to student performance that is positively associated with program completion rates and grade achievements (GPA). The degree of student satisfaction and the likelihood of subsequent enrollment in online courses depend, in part, on how well courses are planned and taught (DeBourgh, 2003). Overall, satisfied students learn more easily, are less likely to drop out of class, and are more likely to take additional courses and maintain high academic achievement in the blended learning environment.

Theoretical Framework

The theoretical framework that this practical research study utilizes is the seminal work of Chickering and Gamson (1987) whom developed the Seven Principles for Good Practice in Undergraduate Education, which are highly relevant to postgraduate courses as well as secondary education. Through the Seven Principles, at-risk students in a blended learning environment benefit from the following ideologies: (1) encourage contact between students and faculty, (2) encourage cooperation among students, (3) encourage active learning, (4) gives prompt feedback, (5) emphasizes time on task, (6) communicates high expectations, and (7) respects diverse talents and ways of learning (Dreon,2013).

The first principle, *encourage contact between students and faculty*, involves frequent student-faculty contact in and out of classes and is considered the most important factor in student satisfaction and involvement. Faculty concern helps students stay motivated and actively working in their coursework, a key factor in at-risk students' success in the blended learning environment. The second principle, *encourage cooperation among students*, acknowledges that learning is enhanced when it is more like a team effort than a solo race. Good learning, like good

work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning and sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding in the online curriculum. In a blended learning environment, students are encouraged to develop learning communities where they collaborate on assigned lessons and share note-taking skills and strategies that would enhance their progress on the assigned activity. The third principle, *encourage active learning*, rebukes the traditional method of learning in which students sit passively in class listening to teachers, memorizing prepackaged assignments, and spitting out answers. Rather, principle three encourages students to talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. The blended learning curriculum offers this option and enables the at-risk student to correlate what they learn to their educational endeavors. The forth principle, *giving prompt feedback,* ensures success in the blended learning classroom and reinforces the notion that students need appropriate feedback on performance to benefit from courses. In blended classes, students need frequent opportunities to perform and receive suggestions for improvement, reflecting on what they have learned, what they still need to know, and how to assess themselves. For at-risk students, feedback must be consistent as it acknowledges their importance in pursuing their education regardless of the obstacles that have previously barred them. For the fifth principle, it emphasizes *time on task.* Learning to use one's time well is critical for at-risk students as they need help in learning effective time management skills which can establish the basis for high performance in a blended learning environment. For the sixth principle, it involves communicating *high expectations* for at-risk learners. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations of themselves and make extra efforts to ensure the at-risk student has the capability to reach the expectations and adhere to them accordingly. Lastly, the seventh principle concerns *respecting diverse talents and ways of learning* which are integral to blended learning

programs. As at-risk learners bring different talents and styles of learning to school, they need the opportunity to show their talents and learn in ways that work for them. Blended learning offers a personalized system of instruction and mastery learning that allows students to work at their own pace. Such learning helps students define their own objectives, determine their learning activities, and define the criteria and methods of evaluation. Therefore, in order to ensure students have successful learning experiences, it is important to consider these Seven Principles in conjunction with the elements and design of the blended learning environment.

Definitions

Alternative education = involves programs, schools, and districts that serve students and school-aged youth who are not succeeding in the regular public school environment (White & Kochhar-Bryant, 2005)

APEX Learning = This is the online curriculum that is utilized at the site where the research study will be conducted. Founded in 1997, Apex Learning is the leading provider of blended and virtual learning solutions to the nation's schools. The company's standards-based digital curriculum is widely used for original credit, credit recovery, remediation, intervention, acceleration, and exam preparation (APEX Learning Inc., 2015).

At-risk students = students and school-age youth who are under-performing academically, may have learning disabilities, emotional or behavioral problems, or may be deliberate or inadvertent victims of the behavioral problems of others, additional opportunities to achieve academically and develop socially in a different setting (White & Kochhar-Bryant, 2005)

Blended learning education/environment = Blended learning is any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace (Staker, 2011, p.5).

Learning outcomes = Student learning outcomes or SLOs are statements that specify what students will know, be able to do or be able to demonstrate when they have completed or participated in a program/activity/course/project. Outcomes are usually expressed as knowledge, skills, attitudes or values (Bresciani et al, 2004).

Online learning/education = Online education utilizes the Internet or videoconferencing to create learning communities. Course materials are provided on a Web site and are occasionally found on CD-ROM; email, bulletin boards, forums, and chat rooms are used to interact with other students and teachers (Keeling, 2006).

Models of blended learning education: Face-to-Face Driver = Of all the blended learning models, face-to-face driver is the closest to a typical school structure. With this approach, the introduction of online instruction is decided on a case-by-case basis, meaning only certain students in a given class will participate in any form of blended learning (Woolley-Wilson, 2015).

Models of blended learning education: Rotation = In this form of blended learning, students rotate between different stations on a fixed schedule – either working online or spending face-to-face time with the teacher (Woolley-Wilson, 2015).

Models of blended learning education: Flex = With this approach, material is primarily delivered online. Although teachers are in the room to provide on-site support as needed, learning is primarily self-guided, as students independently learn and practice new concepts in a digital environment (Woolley-Wilson, 2015).

Models of blended learning education: Online Lab = In this scenario, students learn entirely online but travel to a dedicated computer lab to complete their coursework. Adults supervise the

lab, but they are not trained teachers. This not only allows schools to offer courses for which they have no teacher or not enough teachers, but also allows students to work at a pace and in a subject area that suits them without affecting the learning environment of other students (Hudson, 2015).

Models of blended learning education: Self-Blend = the self-blend model of blended learning gives students the opportunity to take classes beyond what is already offered at their school. While these individuals will attend a traditional school environment, they also opt to supplement their learning through online courses offered remotely. Self-blend is ideal for the student who wants to take additional Advanced Placement courses, or who has interest in a subject area that is not covered in the traditional course catalog (Hudson, 2015).

Models of blended learning education: Online Driver = a form of blended learning in which students work remotely and material is primarily delivered via an online platform. Although face-to-face check-ins are optional, students can usually chat with teachers online if they have questions (Hudson, 2015).

Student satisfaction = the sum of student feeling and attitude that results from aggregating all the benefits that a student hopes to receive from blended learning environment system (Wu, Tennyson, and Hsia, 2010).

Traditional education = involves face-to-face learning typically occurring in a teacher-directed environment with person-to-person interaction in a live existing, high-fidelity environment (Graham, 2005).

Significance of Study

We can no longer ignore the ubiquity of technology—we must welcome it into our classrooms and learning activities (Hudson, 2015). To inspire engagement, we need to keep pace

with students who operate in an increasingly mobile world where information and communication are accessed 24/7 through smartphones, laptops, and tablets. There is mounting evidence that complementing or replacing lectures (i.e., traditional education) with student-centric, active learning strategies and learning guidance—rather than memorization and repetition—improves learning, supports knowledge retention, and raises achievement. Blended learning offers new student-centered educational methods as a way to connect with every student right where they are and support progress toward grade level standards, while continuing to cultivate the development of the whole child.

For at-risk learners, student satisfaction is important because it influences the student's level of motivation (Chute, Thompson, & Hancock, 1999; Donahue & Wong, 1997). This is an important psychological factor in student success (American Psychological Association, 1997). Meeting and exceeding the students' expectation not only satisfies students, but also leads them to become advocates for others seeking educational gratification. According to the Sloan Consortium's "Five Pillars of Quality Online Education" (2011), they declare student satisfaction to be the most important key to continuing learning as it reflects learners' evaluation of the quality of all aspects of the educational program. Regarding student satisfaction in a blended learning environment, it is a large scale opportunity to develop schools that are more productive for students and teachers by personalizing education to ensure that the right resources and interventions reach the right students at the right time (Ark et al., 2013). By utilizing blended learning courses, at-risk students are given more autonomy over their learning and experience high levels of engagement. When designed correctly and supported by the right resources, blended learning combines the best of in-person and virtual learning in a way that's individualized for each student engaged in their own learning.

According to a 2003 National Research Council report on motivation (i.e., student satisfaction), lack of motivation is a real and pressing problem. Up to of 40 percent of high school students are chronically disengaged from school. Students who are bored, inattentive, or who put little effort in schoolwork are unlikely to benefit from better standards, curriculum, and instruction unless schools, teachers, and parents take steps to address their lack of motivation (Center for Education Policy, 2013). For at-risk students in a blended learning environment, maintaining student satisfaction is a pressing need so these students can obtain a secondary education. If at-risk students become dissatisfied with their learning, they are more likely to drop-out of school and would have very limited options in completing their education. In addition, at-risk students' would experience a wide array of economical and social problems that exacerbate their ability to transition to careers and maintain stability in adulthood.

According to Sum et al (2009), at-risk students confront a number of labor market problems in their late teens and early twenties. In 2008, slightly less than 46 percent of the nation's at-risk youth were employed. This implies an average joblessness rate of 54 percent for young high school dropouts throughout the nation. In addition, at-risk students with no years of post-secondary schooling achieved average earnings of approximately $14,600 while those with a bachelor's degree obtained average earnings of approximately $24,800. Over their working lives, the average high school dropout will have a negative net fiscal contribution to society of nearly -$5,200 while the average high school graduate generates a positive lifetime net fiscal contribution of $287,000. In addition, the institutionalization of at-risk males was more than sixty-three times higher than those males that graduated from high school. [Nearly 1 of every 10 young male considered at-risk was institutionalized versus less than 1 of 33 high school graduates.] Overall, the average at-risk student will cost taxpayers over $292,000 in lower tax revenues, higher cash and in-kind transfer costs, and imposed incarceration costs relative to an average high school graduate. On the other hand, students who are motivated to learn have

higher achievement, show better understanding of the concepts they are taught, are more satisfied with school, and have lower dropout rates.

In essence, to be competitive in the 21st century, students must be proficient in the use of technology, be critical thinkers and problem-solvers, and be able to communicate with the world around them. Blended learning education offers a student-centered classroom, an in-depth learning environment, and deeply engaging experiences so each student can actively participate in his or her own learning experience. Blended learning combines computer technology, on-line content, and digital communications with traditional direct instruction, offering multiple opportunities for students to learn and be prepared for college and the work force. Furthermore, blended learning offers a truly differentiated instructional program for at-risk youth where each and every student can receive a standards-aligned, appropriate education and are ultimately satisfied with their learning experience in the blended classroom.

Limitations and Delimitations

The study for this research investigation had three limitations. First, the duration of the research study will be limited to one week due to time constraints of dissertation completion. Secondly, while all steps have been taken to ensure maximum cooperation with a larger sample size of student participation, the administration of the student survey will only be conducted over a two-day session versus an entire week. Thirdly, the investigator of the research study is also an employee of the school where the study will be conducted. While steps and methods were adopted to reduce researcher bias in the administration of the student surveys and faculty interviews, it was not discounted.

In determining the delimitations of the research study, it is acknowledged that the investigator chose to primarily focus on student satisfaction rather than student achievement due to ease of instrumentation measurement. Secondly, the focus was also on traditional versus blended learning; excluding online/virtual learning and distance education. Thirdly, due to the

continuous enrollment and withdrawal of students on a weekly basis, the investigator elected to select only participants that were present during the two-day administration of the student survey. Lastly, the student survey will be given to all students in the school regardless of age or grade level. This protocol was adhered to so as to provide a larger sample of the study (approximately four hundred students) in which to triangulate and analyze data.

CHAPTER II: LITERATURE REVIEW

This literature review examines the dominant concepts and aspects of blended learning programs at the secondary level (i.e., high school) and the teaching pedagogies conducive to student satisfaction with blended education. The research on blended education has increased as more schools (i.e., public, private, charter, independent, virtual) are coming into existence to service students interested in online education.

Concepts discussed throughout this chapter include empirical studies and research concerning models of blended learning programs, components of a blended learning program, pedagogies associated with blended and online learning, various facets that make up the blended learning student, student satisfaction, and the future of blended learning.

Models of Blended Learning Education

Blended learning is any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, and path and/or pace (Horn & Staker, p.5).

To glean a visual understanding of this concept, the InnoSight Institute and the Charter School Growth Fund collaborated on an in-depth article, *The Rise of K-12 Blended Learning: Profiles of Emerging Models* (Staker, 2011) that details six blended learning programs that are constantly evolving as innovators continue to develop new models of blended learning.

- Model I: Face-to-Face Driver
- Model II: Rotation
- Model III: Flex
- Model IV: Online Lab
- Model V: Self-Blend
- Model VI: Online Driver

Model I: Face-to-Face Driver

The first blended learning model is the Face-to-Face Driver and relies on face-to-face teachers to deliver most of their curricula to their students in a lecture format inside the classroom. This particular model allows the teacher to deploy online learning on a case-by-case basis to supplement or remediate, often in the back of the classroom or in a technology lab. An example of this model is Leadership Public Schools in California. Leadership Public Schools allows Hispanic students who are struggling to learn English sit at computers in the back of the classroom and catch up with the traditional class at their own pace by using an online textbook that provides Spanish-English translations.

Model II: Rotation

The second blended learning model is the Rotation format in which students rotate on a fixed schedule between learning online in a one-to-one, self-paced environment and sitting in a classroom with a traditional face-to-face teacher. This format also involves a split between the traditional model and the blended model and between remote (at home) and onsite location. The face-to-face teacher oversees the online work so the curriculum is used supplementary and not as the sole instructional method of delivery. Carpe Diem High Schools in Arizona operates in the rotation model and consists of class periods fifty-five minutes long. For each course, students spend one period in an online-learning room for concept introduction and one period in a traditional classroom for application and reinforcement. They complete two to three rotations per day.

Model III: Flex

The third model of blended learning is Flex learning and features an online platform that delivers most of the curriculum and the teacher-of-record provides on-site support on a flexible and adaptive as-needed basis through in-person tutoring sessions and small group sessions. One must note there is no whole class delivery of instruction with this approach; rather individualized

attention is given to the student and their course of study. Advance Path Academics, located in Virginia, operate within the Flex model. Each of AdvancePath Academic's dropout recovery academies features a computer lab where students spend most of their time learning online. In addition, face-to-face, certified teachers also call the students into an offline reading and writing zone or small-group instruction area for flexible, as-needed help.

Model IV: Online Lab

The fourth model of blended learning is the Online Lab. This model characterizes programs that rely on an online platform to deliver the entire course but in a brick-and-mortar lab environment. The online platform (i.e., e2020, APEX, FLVS) usually embodies online teachers and as such paraprofessionals supervise, but offer little content expertise in the brick-and-mortar environment. Unique to the online lab model is that students that participate in this model also take traditional courses and have typical block schedules that consist of learning in a general education classroom. A key example of this model is Florida Virtual School learning labs in Miami-Dade County Public Schools. It is here students complete courses online at their traditional school under adult supervision, but with no face-to-face instruction.

Model V: Self-Blend

The fifth blended learning model that exists is known as Self-Blend. This model allows students the choice of taking one or more courses online to supplement their traditional school's catalog. The online learning is always remote, but the traditional learning is in a brick-and-mortar school. In addition, all supplemental online schools that offer a la carte courses to individual students facilitate self-blending. Michigan Virtual utilizes this model by allowing students to complete courses in a virtual environment at their home as the courses are not offered at their traditional high school.

Model VI: Online Driver

The Online Driver is the sixth model of blended learning programs and involves an online platform and online teacher which delivers the curriculum. Students work remotely and face-to-face check-ins are optional and at other times required. Program participation at a brick-and mortar place is primarily used for extracurricular activities. The online driver model is a success with students at Albuquerque Public Schools' eAcademy. Here students meet with a face-to-face teacher at the beginning of the course. If they maintain a minimum grade of C or higher, they are free to complete the rest of the course online and remotely, although some choose to use the onsite computer labs.

Components of a Blended Learning Program

The influence of blended learning is gradually becoming a commonplace positive disruptive innovation that is having a profound effect on the education of our nation's students. With the ever increasing online programs coming into existence, there also arises a need to understand the foundational aspects of an effective blended learning program. The InnoSight Institute (2011) posed such a problem to various operators of education-technology programs and as a result devised five solutions that are general in nature yet are central to the promotion and success of future programs in online education.

The first solution regards the employment of *integrated systems* that support the seamless assimilation of online content from different sources into the student experience, while allowing student achievement data to flow easily across the school in real-time. The second solution involves *hundreds of hours of high-quality dynamic content* aligned to standards so students can stay powerfully engaged during the school year and across years. Early online content often resembled paper textbooks and was not dynamic. Content providers are moving toward more engaging student experiences, but adaptive learning technology is still at a nascent stage and true

individualization does not yet exist (p.11). The third solution concerns *analytics* that allow operators to provide more effective learning experiences for networks of students. As blended learning rapidly increases the amount of student achievement data available for analysis and shortens assessment cycle times, entrepreneurs will likely create analytic and adaptive software that focuses on student achievement and its correlation to student satisfaction in the blended environment. The fourth solution employs the use of *automation* to simplify educators' lives by eliminating low-value manual tasks like attendance and student assessment data entry. *Enhanced student motivation* is the fifth solution and through applications that engage and incentivize students in their own learning through social networks, games, and rewards (p.12).

What are the successful pedagogies are associated with blended learning programs? How can the blended learning teacher effectively provide their students with the tools and techniques central to success in online education? The blended learning teacher has four roles that are relevant to current teaching conditions using Berge's (1995) framework for online teaching roles. The proposed four roles are pedagogical, social, managerial and technological. However, complexity arises when teachers implement this approach within various settings involving learners, disciplines, outcomes, and local conditions (Gerbic, 2011).

In assuming the pedagogical role, blended teaching involves moving away from a content transmission model, where learning is largely teacher- directed and controlled, that is, learning goals, activities and class talk are largely determined by the teacher. Instead, the blended model is presented as learner-centered and features technology-mediated learning which focuses on knowledge construction, authentic activities, and social interaction (Gallini & Barron, 2002). This mindset allows the teacher to assume the role of a facilitator and lessens their dominant role as the classroom teacher.

The review of literature also indicates that social roles have also changed for teachers, especially for those who were concerned about losing connections with their students if face-to-

face contact were reduced. Instead, teachers have indicated the value of building relationships and connections through online discussions and email (McShane, 2004) building online communities (Kaleta et al., 2006), and using face-to-face classes to develop and emphasize social commitment and community (Brunner, 2007). The internet and Web 2.0 now provide extensive opportunities for accessing and publishing knowledge and emphasize more than ever significant but different roles for teachers in relation to working with students to develop their abilities to use these new literacies in a rigorous fashion (Gerbic, 2011) in the blended classrooom.

Though the managerial role is not discussed in the literature as in-depth as the other three roles it still deserves recognition. In McShane's (2004) study, teachers identified the heightened visibility attached to the online mode and the increased need for structure. This raised student expectations and teachers reported engagement in increased levels of reflection, evaluation, planning and organizing. The fourth role is technological and is an entirely new role for teachers coming from a face-to-face teaching practice to an online teaching environment. Vaughan (2007) remarks on the importance of acquiring new technology skills and confidence. Only Kaleta et al. (2006) discuss this role directly and they indicated that teachers in their study tended to underestimate the impact of technology, which often manifested itself in dealing with student fears, and troubleshooting while developing their own skills at the same time. Professional development and ongoing technical support is important for teachers, however, until technology operates perfectly, this is an important role which deserves more attention.

Pedagogy in the Blended Learning Environment

Pedagogy in the blended learning environment is the focus in *Tips, Tools, and Techniques for Teaching in the Online High School* by Shantia Kerr (2011). The author advocates "the successful online course is a result of teachers and students maximally utilizing the tools afforded to them. It is often necessary for teachers to not only consider how they use tools in their online classroom, but also scaffold and encourage students' use of them as well" (p.28). In

addition, the author provides recommendations to advance the online instructor's teaching methodology and students' meaningful learning in online high school courses based upon her research in three secondary online learning settings. Principles of practice are advocated for application for teachers, students, as well as school and district level administrators. The ten best practices that will be discussed are: (1) Include multiple sources of content. (2) Always provide timely, thorough feedback, (3) Provide opportunities for student choice, (4) Integrate student management of learning in the structure of the course, (5) Include rubrics for assessment of student work, (6) Include a model or example of typical discussion responses and final products, (7) Create authentic learning experiences for students, (8) Have fun with student introductions at the start of the course, (9) Consider the power of social networking, and (10)) Ensure students are aware of the technology requirements needed for success in the course.

Include multiple sources of content is the first best practice and involves a variety of purposefully selected primary and secondary web sources which enhance the online course. Exposure to numerous sources provides students with a range of perspectives domestically as well as globally. Moreover, variety in sources enables students to make intelligent, informed opinions and decisions (p.29). The second best practice is for the online teacher to *always provide timely, thorough feedback*. The online setting can create feelings of distance and disconnect. Prompt and thorough feedback helps students understand their progress in the course. Additionally, it helps student's understand teacher expectations (p.29). *Provide opportunities for student choice in evidencing their understanding of content* is listed as the third best practice and ensures students have a choice in how they will represent their understanding. This promotes autonomy and encourages students to take responsibility for their learning and also encourages the differentiation of learning as students are likely to choose activities that are most conducive to their personal learning style.

The fourth best practice involves *integrating student management of learning in the structure of the course*. An example of this practice includes routine opportunities for students to identify learning goals, monitor the progress of those goals, and revise their learning goals. Including opportunities for management of student learning throughout the course enables students to routinely self-assess their knowledge acquisition in addition to helping students monitor their short and long term learning goals. *Include rubrics for assessment of student work* is the fifth best practice and by providing rubrics before students begin to work on their assignments, this technique informs them of the criteria used to assess their work and offers a visual guide as students complete assignments. The sixth best practice involves *including a model or example of typical discussion responses and final products* for the students to aspire to. This is particularly helpful when teachers and students cannot meet synchronously as it provides a clear example of the teachers' expectations. Models also show students the possible extent (depth and breadth) that their assignment should entail (p.30). The seventh best practice involves the online teacher *creating authentic learning experiences* for his/her students. By engaging in personally relevant assignments, the teacher provides that ultimate connection between students and course content. Additionally, students will engage in higher order thinking through the synthesis, analysis, and other learning activities required for completion of an authentic learning assignment.

Have fun with student introductions at the start of the course is the eighth best practice and encompasses a "fun" introduction that initially introduces everyone to his or her classmates and teacher. It also introduces students to the discussion board feature, allowing them to practice using it prior to full course discussions. Furthermore, an introductory assignment could ease tension or anxiety about the course because it brings all students to one level since success in the activity is not contingent upon content knowledge (p.30). With the ninth best practice, the online teacher should carefully *consider the power of social networking*. Social networking sites such as

ePals (http://www.epals.com), Ning (www.ning.com), and Facebook (www.facebook.com) have great potential to decrease isolation and encourage collaboration in the K-12 online learning environment. Special permissions may be involved in accessing theses websites due to inappropriate advertising content, spyware, malware, etc., so the online teacher and the schools' instructional technology department would need to stay up-to-date with the content of these websites to protect the safety and security of the students. The tenth best practice the author recommends for an online teacher to employ is to ensure students are aware of the *technology requirements* needed for success in the course. It is important for students (and parents or guardians) to know the basic hardware and software they should have. Additionally, Internet connection (and speed of connection) is also an area that should be addressed prior to enrolling in the online course (p.30).

The best practices presented in this article offer key recommendations toward enhancing learning for online and blended learning high school students. It is necessary to encourage teachers and students to maximally use the tools afforded to them. This task requires teachers to take a deliberate, proactive approach in the design, development and implementation of their courses. It also encourages teachers to promote and create opportunities for student interaction. By adhering to the recommendations provided, offer one step toward ensuring all online students receive a quality educational experience (p.30) in both the online and blended learning format.

The Blended Learning Student

In brief, we can say that in order to have motivated students, their curiosity must be aroused and sustained; the instruction must be perceived to be relevant to personal values or instrumental to accomplishing desired goals; they must have the personal conviction that they will be able to succeed; and the consequences of the learning experience must be consistent with the personal incentives of the learner. (Keller, 1983, pp. 6–7)

The four conditions outlined above by Keller were based on a comprehensive review and synthesis of motivational literature. The four conditions resulted in a classification of motivational concepts and theories into four categories depending on whether their primary area of influence is on gaining learner attention, establishing the relevance of the instruction to learner goals and learning styles, building confidence in regard to realistic expectations and personal responsibility for outcomes, or making the instruction satisfying by managing learners' intrinsic and extrinsic outcomes. Keller's theory (1983) is represented by what has become known as the ARCS model (Keller, 1984, 1987a, 1999b) based on the acronym resulting from key words representing the four categories (attention, relevance, confidence, and satisfaction) as they correlate to the Five Principles of Motivation for the blended learning student.

- Principle I: A learner's curiosity is aroused due to a perceived gap in current knowledge.
- Principle II: The knowledge to be learned is perceived to be meaningfully related to a learner's goals.
- Principle III: Learners believe they can succeed in mastering the learning task.
- Principle IV: Learners anticipate and experience satisfying outcomes to a learning task.
- Principle V: Learners employ volitional (self-regulatory) strategies to protect their intentions.

Principle I: Perceived gap in current knowledge. Motivation to learn is promoted when a learner's curiosity is aroused due to a perceived gap in current knowledge. This principle is represented by the first ARCS category, *attention,* which refers to gaining attention, building curiosity, and sustaining active engagement in the learning activity. Research on curiosity, arousal, and boredom (Berlyne, 1965; Kopp, 1982) illustrates the importance of using a variety of approaches to gain learner attention by using such things as interesting graphics, animation, or

any kind of event that introduces incongruity or conflict. A deeper level of attention, or curiosity, is aroused by using mystery, unresolved problems, and other techniques to stimulate a sense of inquiry in the learner (Keller, p.176-77).

Principle II: Meaningful relation to learner's goals. Motivation to learn is promoted when the knowledge to be learned is perceived to be meaningfully related to a learner's goals. This principle, which is represented by the second ARCS category of *relevance*, includes concepts and strategies that establish connections between the instructional environment, which includes content, teaching strategies, and social organization, and the learner's goals, learning styles, and past experiences. Learner goals can be extrinsic to the learning event in that it is necessary to pass a course to be eligible for a desired opportunity, but a stronger level of motivation to learn is achieved when the learner is self-determined (Deci & Ryan, 1985) and experiences intrinsic goal orientation by being engaged in actions that are personally interesting and freely chosen.

Principle III: Success in mastering the learning task. Motivation to learn is promoted when learners believe they can succeed in mastering the learning task. This principle is represented by the third ARCS category, which is *confidence*. It incorporates variables related to students' feelings of personal control and expectancy for success. Confidence is achieved by helping students build positive expectancies for success and experience success under conditions where they attribute their accomplishments to their own abilities and efforts rather than to external factors such as luck or task difficulty (Weiner, 1974).

Principle IV: Satisfying outcomes to a learning task. Motivation to learn in the blended format is promoted when learners anticipate and experience satisfying outcomes to a learning task. The first three principles pertain to conditions that are necessary to establish a student's motivation to learn, and the fourth, which is represented in the ARCS model by the fourth category, *satisfaction*, is necessary for learners to have positive feelings about their learning experiences and to develop continuing motivation to learn (Maehr, 1976). This means that

extrinsic reinforcements, such as rewards and recognition, must be used in accordance with established principles of behavior management (Skinner, 1968), and must not have a detrimental effect on intrinsic motivation (Condry, 1977; Deci & Ryan, 1985). Providing students with opportunities to apply what they have learned, coupled with personal recognition, supports intrinsic feelings of satisfaction. Finally, a sense of equity, or fairness, is important (Adams, 1965). Students must feel that the amount of work required by the course was appropriate; that there was internal consistency between objectives, content, and tests; and that there was no favoritism in grading.

Principle V: Employment of self-regulatory strategies. Motivation to learn is promoted and maintained when learners employ volitional (self-regulatory) strategies to protect their intentions. After becoming motivated to achieve a goal, it is necessary to persist in one's efforts to achieve it, which is the focus of this fifth principle. Sometimes the driving forces represented in the first four principles are powerful and only minimal volitional strategies of self-control are necessary to stay on task. However, this isn't always true, because various kinds of distractions, obstacles, and competing goals can interfere with persistence. At this point, people who are able to overcome these obstacles and maintain their intentions tend to employ volitional, or self-regulatory, strategies that help them stay on task in the blended classroom.

The motivational and volitional concepts represented by the five principles define the conditions under which students are likely to have high levels of motivation and persistence in their immediate environments and also have positive levels of continuing motivation (Maehr, 1976) to learn more about the given topic. Combining technology-based delivery systems with classroom delivery offers opportunities to integrate motivational support strategies in novel ways. More studies are leading toward more procedural applications that can be incorporated by teachers and other instructional designers, and they provide a basis for continued inquiry on ways to systematically diagnose and develop solutions for motivational and volitional problems

and to develop more refined and sophisticated approaches to the various types of blended learning. In conclusion, both previous research and new developments in blended learning illustrate validity of the five motivational and volitional principles when combined with a systematic design process to develop practices that exemplify the principles prescribed (Keller, 2008).

Student Satisfaction

To determine student satisfaction in a blended learning environment, particularly with at-risk students, Bollinger and Martindale (2004) have identified three key factors central to student satisfaction: the instructor in the blended classroom, technologies utilized in the blended classroom, and level of interactivity in the blended classroom. Other factors, such as course management issues and instruction, also contribute toward students' satisfaction with blended education. The first and critical factor in maintaining and increasing student satisfaction in a blended learning environment involves the blended learning instructor (Finaly-Neumann, 1994; Williams & Ceci, 1997). Student satisfaction is highly correlated with the performance of the instructor, particularly with his or her availability and response time (DeBourgh, 1999; Hiltz, 1993). Instructors must be available for consultation with students and, in addition, must be flexible in teaching that is time and plan independent (M. G. Moore & Kearsley, 1996). In addition, the instructor not only becomes a facilitator of learning, but also a motivator for the at-risk student. To keep learners involved and motivated, feedback on assignments must be given in a timely manner and communication must be on a regular basis so as to prevent high levels of frustration among students (Hara & Kling, 2003).

The second factor in maintaining and increasing student satisfaction in a blended learning environment concerns the technologies utilized in the blended classroom. Technologies used in online and blended learning situations have the potential to enrich the learning experience of the

at-risk student; to do more than what can be done in the traditional face-to-face environment (Smart & Cappel, 2006). In addition, access to technology is another considerable factor influencing student satisfaction when students have access to reliable equipment and adequate technical support (Bower & Kamata, 2000). In essence, online learners must be familiar with the technology used in the course in order to be successful (Belanger & Jordan, 2000). If students become frustrated with technology in the course, they will experience lower satisfaction levels (Chong, 1998; Hara & Kling, 2003) and a decrease in motivation to perform their academic responsibilities. The third factor in maintaining and increasing student satisfaction in a blended learning environment involves the level of collaboration (i.e., interactivity) in the blended classroom. Learning environments in which social interaction and collaboration are allowed and encouraged lead to positive learning outcomes (American Psychological Association, 1997) and collaborative learning tools such as group work and immediate feedback can improve student satisfaction in the online learning environment (Bonk & Cunningham, 1998; Gunawardena & Zittle, 1998). Not only are students able to share viewpoints and discuss them with one another in a blended environment, this type of environment allows for social interaction and creates meaningful, active, learning experiences (Bonk & Cunningham, 1998); a key indicator to maintaining overall student satisfaction in the blended classroom.

The fourth factor, course management, includes access to other resources, such as course textbooks, libraries, and technical support, all which are critical in maintaining student satisfaction in the blended learning environment. The fifth factor in maintaining and increasing student satisfaction in a blended learning environment correlates to student performance that is positively associated with program completion rates and grade point averages (GPAs). The degree of student satisfaction and the likelihood of subsequent enrollment in online courses depend, in part, on how well courses are planned and taught (DeBourgh, 2003) and satisfied

students learn more easily, are less likely to drop out of class, and are more likely to take additional courses and maintain high academic achievement in a blended learning environment.

In order to ensure students have successful learning experiences, Chickering and Gamson (1987) developed Seven Principles for Good Practice in Undergraduate Education, which are highly relevant to postgraduate courses as well as the K-12 sector. Therefore it is important to consider the Seven Principles in conjunction with the elements and design of the blended learning environment.

Seven Principles for Good Practice Theory

Principle I: Encourage contact between students and faculty. Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern keeps students motivated, enhances students' intellectual commitment, and encourages them to think about their own values and future plans regarding their educational endeavors.

Principle II: Develop reciprocity and cooperation among students. Learning is enhanced when it is more like a team effort that a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning and sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding within the blended classroom.

Principle III: Encourage active learning. Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and regurgitating answers. Students must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives.

*Principle IV: Give prompt feedback***.** Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. When getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement and at various points during their coursework students need opportunities to reflect on what they have learned, what they still need to know, and how to assess themselves.

Principle V: Emphasize time on task. Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and as such they need help in learning effective time management skills. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis of high performance for all.

Principle VI: Communicate high expectations. Expect more and you will get more. High expectations are important for everyone -- for the poorly prepared, for those unwilling to exert themselves, and for the bright and well-motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations for themselves and make extra efforts to ensure the expectations are adhered to on a daily basis.

Principle VII: Respect diverse talents and ways of learning. There are many roads to learning. People bring different talents and styles of learning to the classroom and students need the opportunity to show their talents and learn in ways that work for them.

The Future of Blended Learning

The future of blended learning will involve the creation of enhanced online curriculums that are adaptable to the individual student's learning style, varied courses that bring about more

diversified experiences to enhance one's schemata, and the incorporation of Web 2.0 tools to garner an increased socialized involvement with blended learning. Whereas Web 1.0 is considered a content-centric paradigm, Web 2.0 is considered a social-centric paradigm and authors Blessinger and Wankel (2013) have detailed four factors in which Web 2.0 technologies are driving online education: (1) these technologies are digital, making them highly versatile and integrative, (2) these technologies are globally ubiquitous, making them accessible to anyone and anywhere there is an Internet connection, (3) these technologies are generally low cost or free, making them accessible to anyone with a computer or mobile device, and (4) with the development of more sophisticated learning theories, it greatly increases our understanding of how to best apply these technologies in an academic setting.

Summary

The theoretical basis for using these tools in an academic setting derives from social constructivist based theories (Vygotsky, 1978) and situated learning theory (Lave & Wenger, 1991). Cognitive and social constructivism is the process of constructing new knowledge and meaning based on learners' contextualized, situated, and authentic experiences. Lave and Wenger's theory holds that learning is situated within the specific culture-based context of the learner. According to this theory, learning is most effective when it is embedded within a specific activity and cultural context that is personally meaningful to learners. (p.8) Thus, these theories inform us that learning is first constructed in a social, cultural, and historical context and then situated at a personal level (Eggen & Kaucak, 2006). Web 2.0 technology, by definition, includes application for participation, interactivity, and collaboration…thus the main challenge is not cost or access but how to most effectively implement the technology to increase engagement and academic achievement (p.9) in the blended learning environment.

The power of using these tools is in their ability to break down barriers (physical, geographical, political, economic, social, technological) and create more agile, inclusive, and democratic learning environments. Using Web 2.0 technologies expands our teaching capabilities and creates more flexible and dynamic learning situations (p.5) Web 2.0 applications focus on learner-centered activities where students are encouraged to participate in dialogue that is personally meaningful by providing them a medium to share their knowledge, experiences, and views. When aligned properly with learning outcomes, these technologies have the potential to cultivate deeper holistic learning (p.5). The overall goal is to create a productive, applicable, and adaptable blended learning experience that incorporates the intricacies of face-to-face learning on a more interactive scale than in the traditional brick-and-mortar classroom.

Chapter III: METHODOLOGY

Blended learning is an innovative and progressive alternative to traditional education. It provides at-risk students a second chance to attain an education that is conducive to their learning needs. As described by Thorne (2003) blended learning education is "a way of meeting the challenges of tailoring learning and development to the needs of individuals by integrating the innovative and technological advances offered by online learning with the interaction and participation offered in the best of traditional learning." Blended learning also provides a flexible platform which helps in addressing the diversity seen in students' learning styles and needs via the integration of interactive online techniques with more traditional teaching strategies (Garrison & Kanuka, 2004; Holley & Dobson, 2008).

Purpose of study

The purpose of this research study is to (a) determine and measure student satisfaction in a blended learning program with at-risk students and (b) assess faculty and student perceptions of blended learning education. This chapter will focus on the research design, population, sampling plan, instrumentation, data collection methods, methods of data analysis, threats to validity, ethical issues, evaluation of research methods, and inclusion/exclusion criteria associated with the action research study.

Research questions

The following research questions addressed in this study are:

1. How is student satisfaction measured in a blended learning environment with at-risk high school students?
2. What factors influence student satisfaction in a blended learning environment with at-risk high school students?

Description of the Setting

The school setting serving as the case study for this research was selected purposively. This action research study will be conducted at an alternative charter school that services at-risk high school students' ages 15 – 20 years old located in the southern region of Palm Beach County, Florida. The charter school is non-traditional and students can elect to attend school either in the morning session from 7:00 am – 11:30 am or the afternoon session from 11:30 am – 4:00 pm or both sessions. Unlike the traditional school year that ends in June, this charter school has an extended school year that ends the second week in July so the students only have one month for summer vacation. Approximate enrollment consists of four hundred and thirty students however actual enrollment fluctuates on a weekly basis due to continuous student enrollment, withdrawal, and chronic absenteeism. Students are placed in one of eight computer labs containing twenty-five working computers in each lab. There is one advisory teacher per lab certified in the following subject areas: English, Mathematics, Social Science, and Science. [Note: There are no certified teachers for the following subject areas: Art, Business Education, Drama, Health, Music, and Spanish. The school often has to hire outside educators that are certified in those subject areas on a part-time basis so that students can receive credit for those courses.] Additional faculty consists of an Exceptional Student Education Specialist, Reading Coach, and Instructional Assistant. The staff consists of Principal, Assistant Principal, Executive Assistant, Enrollment Specialist, Family Support Specialist, Security Specialist, Data Processor, and Career Coach.

Participants

Respondents in this study will consist of eight classroom teachers and at-risk high school students in 9^{th} – 12^{th} grade between the ages of fifteen and twenty years old attending the alternative charter school where the study will be conducted.

Demographics

Student participants electing to participate in the study will consist of a random sample of males and females ages fifteen to twenty years old in ninth thru twelfth grade present during the administration of the study. Student participants are racially diverse with various ethnicities (i.e., White, Black, Hispanic, Other) and ninety percent of students qualify for free or reduced lunch services. For teacher participants, they will participate in surveys and focus group interviews. The demographics consist of three female and four male teachers. There are three English, three Mathematics, and two Science teachers.

As a faculty member at the school where the research study will be conducted, the investigator will have direct access to the participants and their data. The investigator will utilize non-probability purposive sampling as the sampling method for this study. According to Oliver (2006) purposive sampling is a form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research. Some types of research design necessitate researchers taking a decision about the individual participants who would be most likely to contribute appropriate data, both in terms of relevance and depth.

Instrumentation

The instrumentation involved for student participants will consist of a *Blended Course Student Survey* developed by the University of Central Florida and the American Association of State Colleges and Universities and contains three sections. The first section will collect demographical/personal data such as gender, academic standing, and overall grade point average. The second section will consist of a 19-item questionnaire on a 5-point LIKERT scale, ranging from '1-strongly disagree' to '5-strongly agree' for positive items and from '1-strongly agree' to

'5-strongly disagree' for negative items. The items are based on the outcome of the literature review, addressing elements integral to student satisfaction in blended learning environments. The 19 items will address the following student satisfaction elements: 1) instructor, 2) technology, 3) class management, 4) interaction, and 5) instruction. Lastly, the third section will include four open-ended questions that allow student input in written response (see Appendix A).

The second instrumentation will be a faculty survey to determine faculty perceptions concerning blended learning education as it is utilized in their classrooms. The survey, a *Blended Course Faculty Survey*, was also developed by the University of Central Florida and the American Association of State Colleges and Universities and contains two sections. The first section concerns demographical data that includes gender, years teaching experience, subject area certifications, and ethnicity. The second section assesses educator perceptions teaching in a blended learning environment and responses are derived from a five-point LIKERT scale as well as interview questions. According to Gay, Mills, Airasian (2005), the LIKERT scale is an "affective" instrument as it assesses individuals' feeling, values, attitudes, and beliefs throughout the study. In addition, the faculty survey will also be used when conducting focus group interviews with the teachers.

Data Collection Procedures

According to Gay, Mills, and Airasian (2005), scientific inquiry requires the collection, analysis, and interpretation of research. Having an availability, or access, to data is critical to the researcher. In any qualitative research, access is vital in continuing and subsequently completing the study. Each piece of data and its collection were designed to help the researcher determine and measure student satisfaction in a blended learning program with at-risk students, and, assess faculty and student perceptions of blended learning education at an alternative high school that specializes in blended learning education. The data collection process will be conducted for one

week after IRB approval. The administration of the *Blended Course Student Survey* will only be conducted to students present in school during morning and afternoon sessions. Participation in the study will be voluntary and there will not be personal identifiers of participants. The investigator will only identify the participants with letters and numbers to reflect grade level and gender (i.e., 1. G9 = Number 1, Girl, 9th grade). The *Blended Course Faculty Survey* will be administered to all teachers.

Throughout the study data will be gathered from multiple data points. For data point one, a 19-item Blended Course Student Survey will be administered to all student present over a two-day period. It will be modified by the investigator to fit the needs of the study being conducted at the high school level. Responses include LIKERT scale and short response (See Appendix A). For data point two, an 11-item Blended Course Faculty Survey will be administered to all faculty participants. The survey examines blended learning instruction from the perspective of the classroom teacher and will be modified by the researcher to fit the needs of the study being conducted at the high school level. Responses include LIKERT scale and short response (see Appendix B). Lastly, data point three will consist of focus group interviews with faculty by content area from the Blended Course Faculty Survey. Questions will be open-ended and recorded in written format as prescribed in Appendix B.

Data Analysis Procedure

The researcher will employ three strategies suggested by Miles and Huberman (1994) to analyze the data collected in this case study: data reduction, data display, and conclusion drawing and verification. Data reduction is an activity where the researcher is able to "select, focus, abstract, and transform the data to draw final conclusions that can be verified" (p. 10). Data display is organized to generically display the information gathered, which allows for conclusions to be drawn, and the researcher begins to know, understand, and conclude what is

displayed (Miles & Huberman, 1994). Conclusion drawing and verification requires the "researcher to begin deciding what data may mean by noting the patterns, regularities, causal flows, explanations, propositions, and possible configurations" (Miles & Huberman, 1994, p. 11).

The investigator will also employ triangulation to solidify their findings from multiple sources of data. According to Bryman (2012), triangulation refers to the use of more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings. Since much social research is founded on the use of a single research method and as such may suffer from limitations associated with that method or from the specific application of it, triangulation offers the prospect of enhanced confidence. In ensuring the trustworthiness of the data collected, the investigator will use a random sampling of participants for the study. According to Shenton (2003), although much qualitative research involves the use of purposive sampling, a random approach may negate charges of researcher bias in the selection of participants. As Preece notes, random sampling also helps to ensure that any "unknown influences" are distributed evenly within the sample (1994). Furthermore, a random method is particularly appropriate to the nature of this investigation as it will provide the greatest assurance that those selected are a representative sample of the larger group (Bouma and Atkinson, 1995).

In addition, the researcher will employ tactics to help ensure honesty in participants when contributing data. In particular, each person who is approached will be given opportunities to refuse to participate in the research study so as to ensure that the data collection sessions involve only those who are genuinely willing to take part and prepared to offer data freely. The investigator will review an examination of previous research findings to assess the degree to which the researcher's project's results are congruent with those of past studies. Silverman (2000) considers that the ability of the researcher to relate his or her findings to an existing body

of knowledge is a key criterion for evaluating works of qualitative inquiry. In this respect, reports of previous studies staged in the same or a similar organization and addressing comparable issues may be invaluable sources.

Results from information collected from the Blended Course Student Survey and Blended Course Faculty Survey will be transcribed to identify trends, relationships and patterns that have generated from this sample for the purpose of the answering the research questions. The investigator will then be able to funnel the amount of data collected into smaller, more manageable sets of information; however, the investigator must ensure this does not minimize, distort, oversimplify, or misinterpret the data (Mertler, 2012), which may affect the validity of the results, and that the relationships identified truly reflect what they are intended to represent in the research. Data analysis will be performed using Excel and will be stored electronically in a personal computer with security (requiring a password and identification). The following data will be analyzed using visual representation: (1) recorded LIKERT scale responses from the Blended Course Student Survey to measure and determine student satisfaction in a blended learning environment, (2) recorded LIKERT scale responses from Blended Course Faculty Survey to evaluate teacher perceptions of blended learning education at the research study site, and (3) analysis of focus group interviews for comparisons of issues, trends, and teaching strategies employed in a blended learning environment. The data reviewed will serve as key aspects in Chapter V of the dissertation determining future recommendations of blended learning education.

Threats to Validity

Due to the nature of the school and the type of students that are serviced, there are only eight teachers throughout the entire school, reflecting a small sample size and threat to validity. Further research has produced results in which alternative schools that operate similar to this

school where the research will be conducted also have small faculty ratios of eight teachers or less. Another threat to validity for this research study is population validity. The results of the study can be generalized only to similar alternative schools which service at-risk youth. In the state of Florida, there are approximately forty schools that operate as blended learning schools and are considered alternative and service populations of at-risk students with enrollments of approximately five hundred or less students.

Ensuring Trustworthiness

According to Shenton (2003), the development of an early familiarity with the culture of participating organizations before the first data collection dialogues take place may be achieved via consultation of appropriate documents and preliminary visits to the organizations themselves. Lincoln, Guba, and Erlandson (1993) are among the many who recommend "prolonged engagement" between the investigator and the participants in order both for the former to gain an adequate understanding of an organization and to establish a relationship of trust between the parties. In ensuring trustworthiness, the researcher has had continuous contact with the participants and has developed a positive repertoire as well as familiarity with the participants since the beginning of the school year (August 2014). In addition, the researcher has also employed random sampling of individuals to serve as informants. As Preece (1994) notes, random sampling also helps to ensure that any "unknown influences" are distributed evenly within the sample. Furthermore, Bouma and Atkinson conclude "A random sampling procedure provides the greatest assurance that those selected are a representative sample of the larger group" (1995). Thirdly, employing the use of triangulation also ensures trustworthiness. Triangulation may involve the use of different methods, especially observation, focus groups and individual interviews, which form the major data collection strategies for much qualitative research. For this study, the researcher will employ surveys and focus group interviews.

According to Guba, Brewer, and Hunter (1995), the use of different methods in concert compensates for their individual limitations and exploits their respective benefits. Where possible, supporting data may be obtained from documents to provide a background to help explain the attitudes and behavior of those in the group under scrutiny, as well as to verify particular details that participants have supplied. Opportunities should also be seized to examine any documents referred to by informants during the actual interviews or focus groups where these can shed more light on the behavior of the people in question.

Ethical Considerations

The study will be ethical for the following reasons:

1. Approval for the study will be obtained from Lynn University Institutional Review Board for the Protection of Human Subjects (IRB)
2. IRB Form 1- Application and Research Protocol for Review of Research Involving Human Subjects in a New Project
3. The authorization for informed consent for student and faculty participants, minor assent, and parental consent forms minor [Appendixes D,E,F,G]
4. Proper permission will be obtained from the developers of the survey instruments
5. All appropriate staff and administration personnel at the study site will be informed and receive an explanation of the purpose of the study.
6. All data will be destroyed after five years.

Research Method

A mixed-method, non- experimental, and survey research design will be used to evaluate student satisfaction in a blended learning program with at-risk students, and assess faculty and student perceptions of blended learning education at an alternative high school that is blended learning. The qualitative analysis will involve open-response survey questions to both students

and faculty assessing their perspectives about blended learning education individually and in focus groups. The quantitative analysis will involve LIKERT scale responses on the student survey that details student perceptions regarding the five aspects of blended learning education.

Target Population

In the process of collecting qualitative data, one of the first steps will be to identify the participants in the study, the procedure for selecting these individuals, and determining the number of participants needed for data analysis. For this study the target population will consist of at-risk high school students at an alternative charter school located within the southern region of Palm Beach County School District.

Accessible Population

The accessible population for this study will consist of at-risk high school students (15 – 20 years old) at an alternative charter school in the southern region of Palm Beach County School District. The data collected for this population will be limited to approximately four hundred students in attendance throughout the two-day administration of the survey.

Inclusion Criteria

To be eligible to participate in this study, respondents had to be:

1. Students identified as at-risk high school students and faculty attending this alternative school located in the southern region of the Palm Beach County School District.

2. All students present during the two-day administration of the survey during both sessions (morning and afternoon).

Exclusion Criteria.

1. At-risk high school students and faculty not attending this alternative school.

2. Students not present during the two-day administration of the survey.

Summary

This chapter included a discussion of the methodology used to determine and measure student satisfaction in a blended learning program with at-risk students, and assess faculty and student perceptions of blended learning education at an alternative high school in southern Palm Beach County, FL. Findings will be reported in Chapter IV, and a discussion of the results, theoretical implications, and recommendations for further research will conclude the dissertation in Chapter V.

CHAPTER IV: FINDINGS

In recent years, the rapid development of information and communication technology has facilitated a convergence between face-to-face instruction and technology-mediated learning environments. In addition, the impact of learning environments in relation to learning outcomes has been explored by researchers and is a concern among teachers as they seek to improve student learning outcomes in their classrooms. According to the New York Times essay *Death Knell for the Lecture: Technology as a Passport to Personalized Education* (Koller,2011), our education system is in a state of crisis. Among developed countries, the United States is 55th in quality rankings of elementary math and science education, 20th in high school completion rate.

Nonetheless, there is a progressive frontrunner to traditional education that has made noteworthy strides towards increasing student satisfaction and achievement. This frontrunner is known as blended learning education. Blended learning offers the advantages of distance education/online learning with the effective aspects of traditional education, such as face-to-face interaction. For at-risk learners - students and school-age youth, who are under-performing academically, may have learning disabilities, and emotional or behavioral problems - blended learning is an important and sometimes transformational tool in maintaining student satisfaction and increasing student achievement in an alternative learning environment. In regards to student satisfaction, this is considered an important factor in measuring the quality of blended learning. The research questions addressed in this study were:

RQ1: How is student satisfaction measured in a blended learning environment with at-risk high school students?

RQ2: What factors influence student satisfaction in a blended learning environment with at-risk high school students?

To satisfactorily answer the research questions, a study was conducted involving two main audiences. The first audience was the students at the research site; an alternative charter high school that services at-risk students 15-21 years of age. This research study involved examining blended learning education from the perspectives of the student participants which were potentially valuable as blended learning education continues to gain a strong foothold in the field of K-12 education, specifically with at-risk youth. The second audience for this study involved the classroom teachers who instructed the at-risk students in the blended learning environment. The perspectives of the classroom teachers were invaluable as they were concerned with the student in adherence to school policies and procedures that dictated the instruction and standards in which to provide education services to their students.

Instrumentation – Student Participants

The data collection for student participants consisted of two components. The first component was a Blended Learning Student Survey (Appendix A), developed by the Research Initiative for Teaching Effectiveness at the University of Central Florida, in Association with the American Association of State Colleges and Universities (2014), which contained three sections. The first section included the students' demographic/personal data. Demographic information was collected by the research investigator to obtain descriptive characteristic data for each student. The second section evaluated students' satisfaction about blended learning education using LIKERT scale responses on a Student Satisfaction Survey Form. The satisfaction form measured perceived learner satisfaction on a 5-point Likert scale, ranging from '5-strongly satisfied' to '1-strongly dissatisfied'. The items were based on the outcome of the literature review, addressing six elements integral to student satisfaction in blended learning environments: level of interaction, online course instruction, the classroom teacher, course management, technology, and overall performance of blended learning. In addition, student participants rated their level of satisfaction regarding their educational goals, which were created during the

orientation process when they enrolled in the school. [Note: The enrollment process consists of completion of school district registration form, then a meeting with the Enrollment Specialist who outlines the school procedures, rules, and conducts a school tour with the student and their parents. The orientation process is conducted over three days (Wednesday thru Friday, four hours per day). On Day 1, the Assistant Principal completes a transcript analysis with each student detailing their credits completed and current grade point average, personal goals and expectations, Student/Parent Handbook, and school-wide classroom procedures and rules. On Day 2, the students meet with the Career Coach and they complete Pacing Guides which are a graduation requirement for this particular school. Also, students complete a postsecondary transition plan, a career portfolio, and can receive elective credit for their afterschool job and any volunteer hours on their transcript. Lastly, covered on Day 3 is an orientation with the Reading Specialist. The Reading Specialist conducts an overview of the online curriculum which includes the instructional design and delivery of the online curriculum, assigned courses, pacing charts, lessons, study sheets, note-taking strategies, and quizzes. Afterwards, students begin completing work in their courses so they have a head start prior to their active enrollment the following week. The Day 3 orientation concludes with students completing a school-wide reading assessment in Reading Plus, a web-based reading intervention that uses technology to provide individualized scaffolded silent reading practice for students in grade 3 and higher. Reading Plus aims to develop and improve students' silent reading fluency, comprehension, and vocabulary (readingplus.com, 2015). Upon completion of this assessment, students are assigned a reading level and can receive elective credit and a monetary incentive.]

Lastly, the third section of the Blended Learning Student Survey consisted of student written responses regarding what they liked most/least about blended learning and advice for students new to this alternative learning environment.

Reliability

In order to determine the internal reliability of the Blended Learning Course Student Survey, a reliability analysis was performed with the use of Cronbach's alpha after the completion of the data collection phase. The alpha reliability coefficient of the satisfaction scale was .93 indicating that the instrument was highly reliable. The subscale reliability ranged from 'high' for the instructor dimension (.90) the overall dimension (.83), and the Instruction: APEX dimension (.82), to 'acceptable' for the interaction dimension (0.76) and the technology dimension (0.76) (see Table 1).

Table 1: Internal Reliability

Group	Number of items	Mean	SD	Cronbach's *a*
Interaction	2	3.5	.94	.76
Instruction: APEX	3	3.7	1.0	.82
Instructor	5	4.0	1.1	.90
Course Management	3	3.8	1.1	.80
Technology	2	3.7	1.1	.76
Overall	4	3.8	1.1	.83

Table 2 shows the scale rating determining student levels of satisfaction regarding each category from Table 1. Detailed are the mode, mean, and standard deviation of each question from the Blended Course Student Survey.

Table 2: Mean and Standard Deviation for Students' Satisfaction

ITEMS		STUDENT PARTICIPANTS		ITEMS		STUDENT PARTICIPANTS	
#	MODE	MEAN	SD	#	MODE	MEAN	SD
1	3	3.5	1.0	**11**	5	4.0	1.1
2	3	3.6	1.0	**12**	4	3.7	1.0
3	4	3.8	1.1	**13**	5	4.0	1.1
4	3	3.7	1.0	**14**	3	3.6	1.1
5	3	3.5	1.1	**15**	4	3.7	1.2
6	5	4.1	1.0	**16**	4	3.7	1.2
7	5	4.0	1.1	**17**	4	3.7	1.0
8	5	3.8	1.1	**18**	5	4.0	1.0
9	5	3.8	1.1	**19**	4	3.7	1.4
10	5	4.0	1.1				

Instrumentation – Faculty Participants

The data collection for faculty participants involved three components for this research study. The first component was the completion of a Blended Course Faculty Survey with two sections. The first section included the teachers' demographic/personal data. Demographic information was collected to obtain descriptive characteristics for the faculty. The second section evaluated faculty level of satisfaction about blended learning education, instruction, and interaction in the classroom. There were positive and negative statements on the scale. The positive items were coded from 5 (very satisfied) to 1 (very dissatisfied), and the negative items were coded from 1 (much worse) to 5 (much better) for each statement. There were eleven items on the Blended Course Faculty Survey.

The second and third components for faculty participants consisted of individual and focus group interviews conducted with faculty as additional collections of data. The interviews

were utilized as expansions to the short-answer responses on the Blended Course Faculty Survey, and were designed in order to serve the purpose of the study with the intention of understanding the perceptions of faculty members concerning blended education. As the interviews were more personal in nature, the conversations were audio-taped and transcribed. The interviews began with mutual introduction of the researcher and participants. The researcher inquired about the participants' demographics, bio-data and each faculty participant received a handout of Chickering and Gamson's Seven Principles for Good Practice in Undergraduate Education; giving them enough background information towards the research questions. While a few of the questions are based on the LIKERT five-point scale, the majority of them are open-ended in nature seeking responses as perceived by the interviewees (see Appendix B).

Quantitative Analysis

Findings - Student Participants

Findings for Research Question 1.

Research question 1 asked "How is student satisfaction measured in a blended learning environment with at-risk high school students?" To determine student satisfaction in a blended learning environment, particularly with at-risk students, Bollinger and Martindale (2004) have identified three key findings central to student satisfaction: instructor, technology, and interactivity. Other factors, such as course management issues and instruction, also contribute toward students' satisfaction with blended education. Each factor was addressed on the Blended Course Student Survey.

Findings related to Interaction

Findings related to interaction involve learning environments in which social interaction and collaboration are allowed and encouraged and lead to positive learning outcomes (American Psychological Association, 1997). Collaborative learning tools can improve student satisfaction

in the online learning environment (Bonk & Cunningham, 1998; Gunawardena & Zittle, 1998), and these tools allow for group work and immediate feedback.

The overall mean for student satisfaction in findings related to interaction was 3.5. When asked to scale their level of satisfaction regarding interaction with other students (item#1), mean=3.5. This suggests that students are neither satisfied nor dissatisfied with the level of interaction between themselves. When asked to scale their level of satisfaction in regards to their participation in the blended learning classroom (item#2) the average was slightly higher at mean=3.6. This score is reasonable as students understand they must contribute to their learning through some form of interactivity (e.g., note-taking, tutorial sessions, peer collaboration) in order to ensure a modicum of success in their coursework.

Findings related to Instruction

Findings related to instruction concerns student satisfaction that is linked to student performance and positively associated with program completion rates and grade averages (GPAs). Expected grades by students positively affect their levels of satisfaction (Bower & Kamata, 2000). Satisfied students learn more easily, are less likely to drop out of class, and are more likely to take additional blended learning courses and to recommend the course to others. The degree of student satisfaction and the likelihood of subsequent enrollment in online courses depend, in part, on how well courses are planned and taught (DeBourgh, 2003).

The overall average for student satisfaction in findings related to instruction was high at mean=3.7. This score is reflective of the perceptions students have towards the blended learning curriculum known as APEX Learning, Inc. APEX Learning, Inc. was founded in 1997 and is the leading provider of blended and virtual learning solutions to the nation's schools. The company's standards-based digital curriculum — in Math, Science, English, Social Studies, World

Languages, and Advanced Placement — is widely used for original credit, credit recovery, remediation, intervention, acceleration, and exam preparation (apexlearning, 2015).

When asked whether the use of blended learning technology in this school encourages me to learn independently (item #3), this response generated the highest score at mean=3.8. Students were highly satisfied. The next item (#4), generated a slightly lower response as it determined that students were generally satisfied with the level of effort involved in understanding the APEX Learning curriculum at mean=3.7. APEX offers a curriculum written at a level in which a ninth grader should be able to comprehend and complete with moderate success (at a minimum grade of "C" and higher). The lowest score in the area of factors related to instruction was item five (#5), which asked whether "Blended learning helps me better understand course material", at mean=3.5. Overall, factors related to instruction received positive levels of student satisfaction concerning blended education with at-risk high school students.

Findings related to the Classroom Instructor

The instructor is the main predictor in course satisfaction (Finaly-Neumann, 1994; Williams & Ceci, 1997). Student satisfaction is highly correlated with the performance of the instructor, particularly with his or her availability and response time (DeBourgh, 1999; Hiltz, 1993). Instructors must be available for consultation with students and, in addition, must be flexible in teaching that is time and plan independent (M. G. Moore & Kearsley, 1996). The instructor not only becomes a facilitator of learning but also a motivator for the student. The instructor's feedback is the most important factor in satisfaction with instruction (Finaly-Neumann, 1994). To keep learners involved and motivated, feedback on assignments must be given in a timely manner (Smith & Dillon,1999), and communication must be on a regular basis (Mood, 1995) so as to prevent high levels of frustration among students (Hara & Kling, 2003).

The average mean for student satisfaction involving *findings related to the instructor* was mean=4.0. When asked whether "the teacher makes me feel that I am a true member of the

class", most students were satisfied with mean=4.1 (item #6). When asked to scale the accessibility and availability of the teacher, mean=4.0 (item #7). Though this item was the second highest scored in terms of satisfaction, it is pivotal in understanding the dynamics in which the score was achieved. The blended learning teacher takes on the role of facilitator and provides one-on-one tutorial help for students. There is no whole-class direct instruction as students are continuously enrolled in and completing various courses throughout the semester. Some students may be enrolled in the same course, such as English II, nonetheless, any two students could be in either the first or second semester of the English II course in addition to different units within that course. When asked to scale the communication of classroom expectations and procedures, mean=3.8 (item #8). When asked the level of satisfaction regarding feedback on evaluation of tests and other assignments, mean=3.8 (item #9). The last item (#10) received the third highest score at mean=4.0 which student perceptions scaled at highly satisfied and asked whether "I enjoy learning from the teacher".

Findings related to Course Management

In considering findings related to course management, M. G. Moore and Kearsley (1996) point out that administrative support is of significant importance for online learning students. Access to other resources, such as course textbooks, libraries, technical support, and a help-desk number, are also important in blended learning. The average mean for student satisfaction regarding findings relating to course management, mean=3.8. The first item in this category (item#11) concerned whether the student was able to utilize textbooks, dictionaries, and online research to help with their online course work. The score reported was mean=3.7. In determining the level of satisfaction regarding "the assigning of necessary courses needed to stay on track and attain my high school diploma", (item #12), mean=4.0 as students were highly satisfied with this item. The last item in this category (item #13) was concerned with the exclusion of certain course items such as computer-scored tests, discussions, and journals that allows for a flexible

curriculum to ensure success in the online course. The average score for item #12 was mean=3.6 as student responses fluctuated between satisfied and neutral.

Findings related to Technology

Findings related to technology revolved around technologies used in online and blended learning situations which have the potential to enrich the learning experience, and to do more than what can be done in face-to-face environments (Smart & Cappel, 2006). Access to technology is one of the most important factors influencing student satisfaction (Belanger & Jordan, 2000). In addition, students must have access to reliable equipment (Bower & Kamata, 2000), and students with limited access are at a considerable disadvantage to learners who have unlimited access (Wegerif, 1998). Access is one of the most important factors influencing student satisfaction (Bower & Kamata, 2000), therefore, online learners must be familiar with the technology utilized in the online course in order to be successful (Belanger & Jordan, 2000).

There were two items addressed in the category regarding factors related to technology with an overall mean=3.7. The first item (#14) asked whether the videos in the APEX online curriculum program are clear and comprehensive. This item had a mean=3.7 as students were satisfied with the videos and the content in which the instruction was presented. The second item (#15), asked whether the technology used for blended teaching is reliable. The level of satisfaction scaled indicated mean=3.7.

Overall Perceptions of Blended Learning

The last finding, measuring student satisfaction in a blended learning environment, concerned overall student perceptions of blended learning with mean=3.8 and contained four items. On whether the school provides the resources necessary for students to succeed in blended courses (item #16), mean=3.7 which students reported as satisfied. On scaling the level of satisfaction regarding the students' overall learning experience in a blended education program

(item #17), mean=3.7. On scaling the level of satisfaction regarding the motivation to succeed (item #18), mean=4.0, the highest score reported for this factor. The last item reported (item #19), asked about the students' overall progress with online courses with mean=3.7. Overall, students reported satisfied to highly-satisfied with blended learning education.

Final Scores in Completed Courses

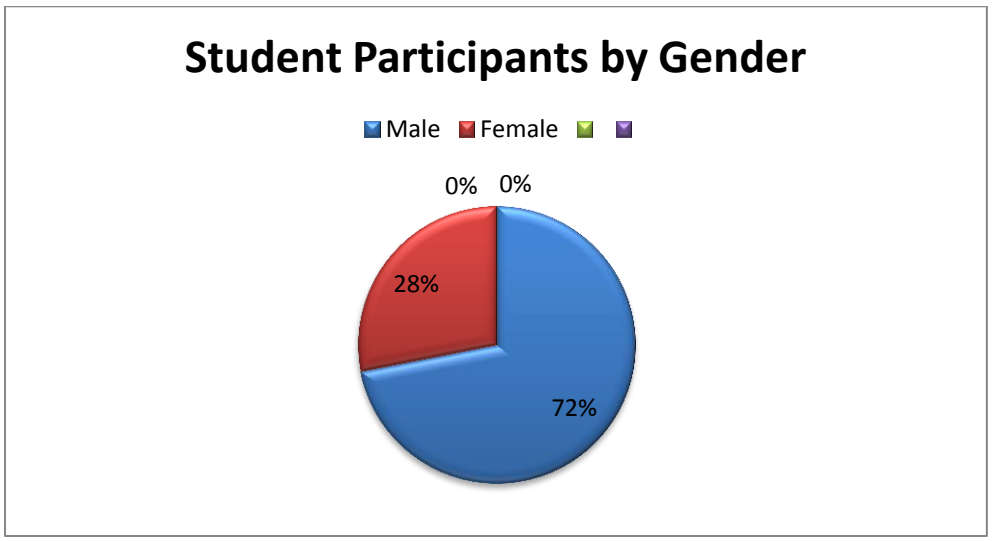
In addition to student survey responses, the researcher also incorporated each participant's final marks in completed classes as key indicators in correlating student satisfaction to student achievement with blended learning education. Table 3 details the overall specifics of the data and the corresponding charts provide a detailed analysis of the student participant's course completions. Two hundred eighty-eight students participated in the research study. From the student participants, seven hundred and one classes were satisfactorily completed with a grade of 70 percent and higher. From the completed courses, three hundred and fifty-one credits were awarded with an average of 1.8 credits awarded per student; an average of 3.6 classes were completed per student and the average grade earned was eighty-three point four percent (83.4%).

Table 3: Overall Statistics

Student Participants	Total Classes Completed	Total Credit Awarded	Average Classes Closed Per Student	Average Credit Earned Per Student	Average grade Earned
288	701	351	3.6	1.8	83.4%

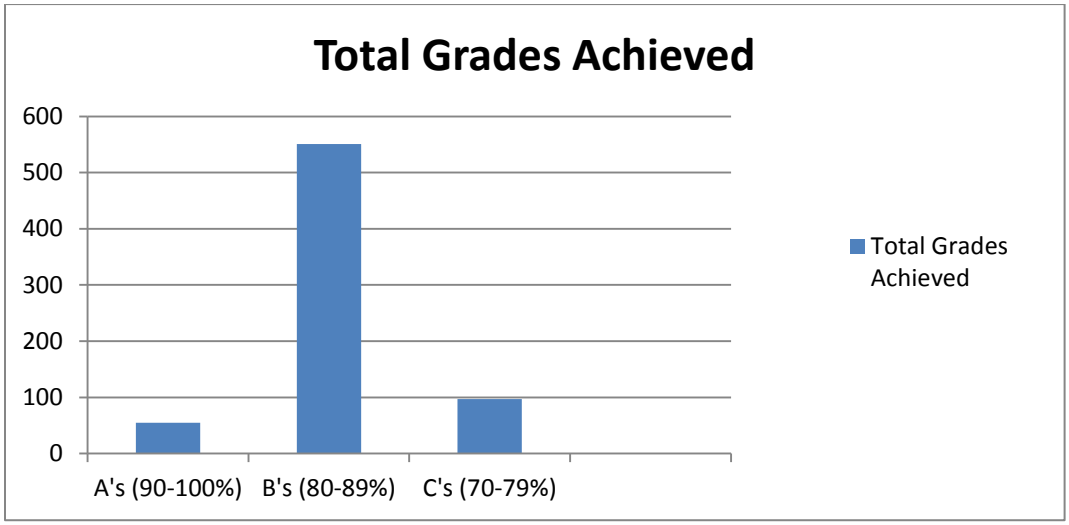
The student participants by gender in the research study equated to seventy-two percent male (170 students), and twenty-eight percent female (118), as detailed in Figure 1.

Figure 1: Student Participants by Gender



For Figure 2 it provides a visual detailing the total grades achieved in completed courses amongst all student participants in the research study. There were a total of seven hundred and three grades awarded. The grade distribution is as follows: fifty-five (55) A's, five hundred and fifty-one (551) B's, and ninety-seven (97) C's.

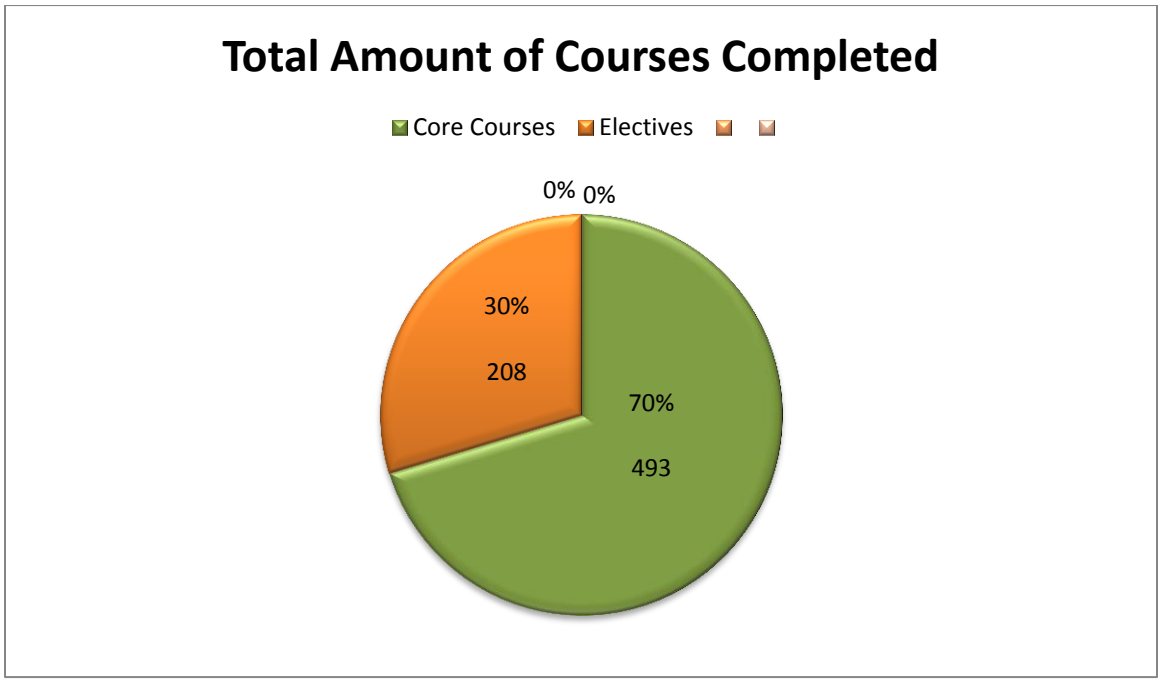
Figure 2: Total Grades Achieved



From the 703 grades awarded (see Figure 3), four hundred and ninety-three of the grades were awarded in core classes that greatly determined the overall grade point average of the student participant. The following core classes were completed by student participants: English I,

II and III, Algebra I, Geometry, World History, U.S. Government, Economics, Biology, and Physical Science. Student participants also received credit in elective courses. Two hundred eight grades of C and higher were awarded in the following elective courses: Intensive Reading, Intensive Math, Spanish, Math for College Readiness, and Health Options through Physical Education .Though they do not weigh as heavily as the core classes, elective courses are essential in increasing overall grade point averages in addition to satisfying the elective credit requirement for a standard high school diploma.

Figure-3: Total Amount of Courses Completed



The following figures below (Figure 4 and Figure-5) provide specifics regarding the distribution of core and elective courses that received grades of 70% and higher from student participants during the research study. Figure 4 reflects core classes and Figure 5 reflects elective courses.

Figure 4: Distribution of Core Classes

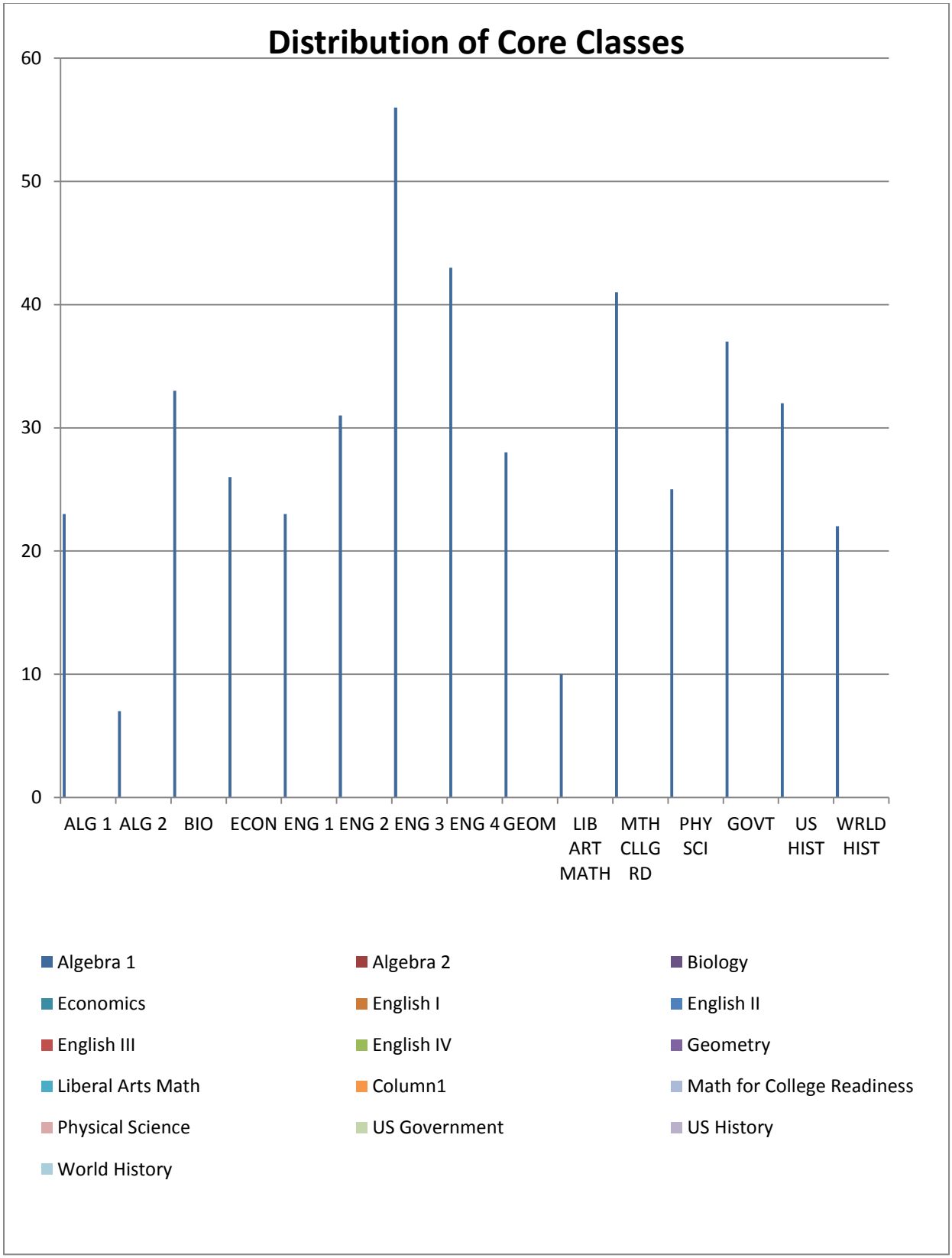
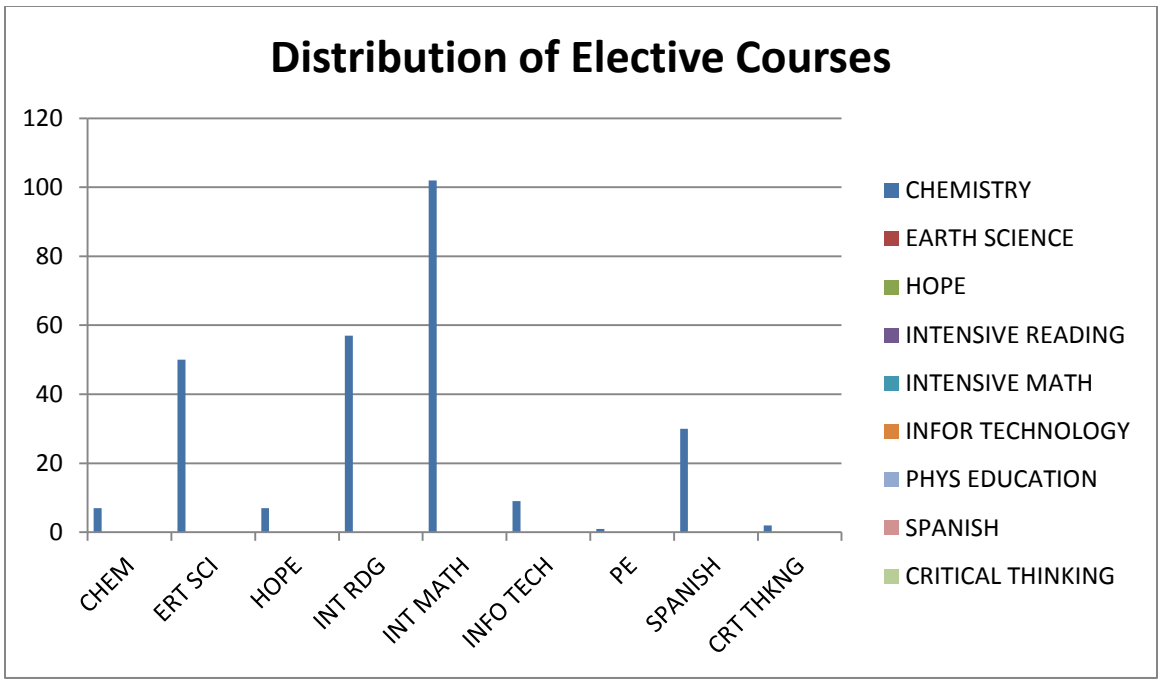


Figure 5: Distribution of Elective Courses



Interesting to note are other statistics that were analyzed from the research study. Firstly, the number of graduates for 2015 increased by twenty-five percent (12 students). There were forty-eight graduates for 2014 and sixty graduates for 2015 (see Figure 6). Secondly, there were approximately three scholarships awarded from various benefactors, specifically OneBlood, a blood bank donation service where students donated blood on a monthly basis for community service hours. Each pint of blood donated was also a financial contribution to various monetary scholarship awards for graduating seniors. Thirdly, many of the student graduates were accepted into post-secondary institutions (see Figure 7) where they are successfully completing their academic endeavors.

Figure 6: Graduates 2014 versus 2015

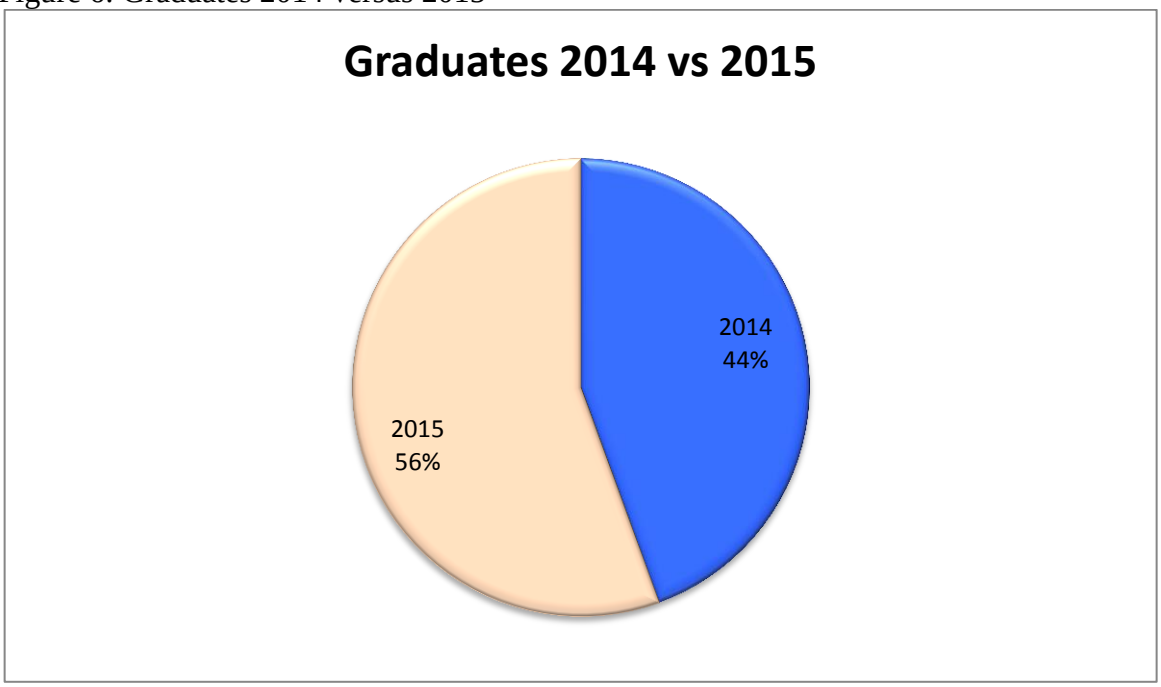
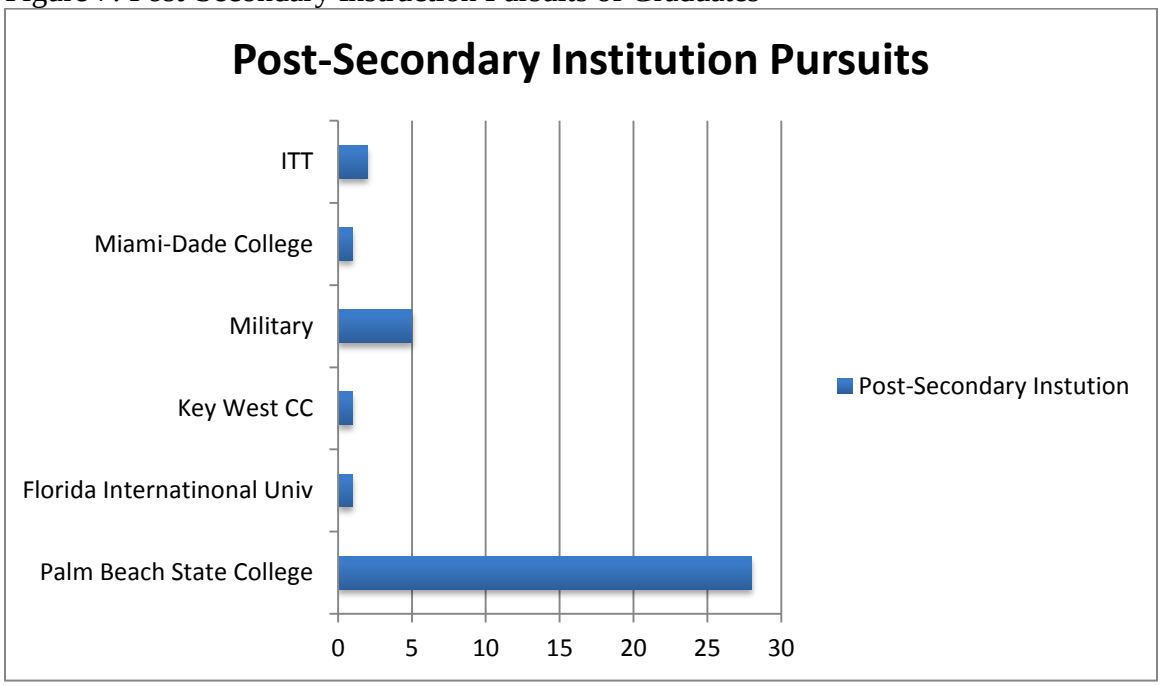


Figure 7: Post-Secondary Instruction Pursuits of Graduates



Findings - Faculty Participants

A quantitative analysis was administered for faculty participants in the form of a Blended Learning Faculty Survey (BLFS) whereupon four out of eleven questions were based upon LIKERT scale responses. All eight faculty members participated and completed the BLFS in its

entirety. From the eight participants, four were males (50%) and four were females (50%). All core subjects were represented with the following statistics: English (2 males, 1 female), Mathematics (1 male, 1 female), Science (1 male, 1 female), and Social Science (1 female).

Satisfaction with Online Curriculum

To determine the level of satisfaction with the online curriculum (APEX Learning, Inc.), LIKERT scale responses ranged from 5-Very Satisfied to 1-Very Dissatisfied. The mean for this question was mean=3.4. Fifty percent of teachers (t=4) were generally satisfied with the APEX Learning curriculum, forty percent of teachers (t=3) were neutral, and ten percent of teachers (t=1) reported being generally dissatisfied.

Quality of Online Curriculum

Question 2 concerned the level of satisfaction regarding the quality of the online curriculum as compared to traditional (lecture-based) curriculum. LIKERT scale responses ranged from 5-Much better to 1-Much worse. For this question, mean=3.0. Forty percent teachers (t=3) reported a level two, which scaled the level of satisfaction as "Worse". Another forty percent teachers (t=3) reported a level three, which scaled the level of satisfaction as "About the same". Twenty percent teachers (t=2) reported a level four, which scaled the level of satisfaction as "Better".

Amount of Interaction in the Blended Classroom

Question 3 concerned the amount of interaction in the blended classroom compared to the amount of interaction in a face-to-face traditional classroom. LIKERT scale responses ranged from 5-Increased to 1-Decreased. For this question, mean=2.6. Forty percent of teachers (t=3) reported a level four, which scaled the amount of interaction as "Somewhat increased". Ten percent of teachers (t=1) reported a level three, which scaled the amount of interaction as "About the same". Twenty-five percent of teachers (t=2) reported a level two, which scaled the amount

of interaction as “Somewhat decreased”. Lastly, twenty-five percent of teachers (t=2) reported a level one, which scaled the amount of interaction as “Decreased”.

Quality of Interaction in the Blended Classroom

Question 4 concerned the quality of interaction in the blended classroom compared to the quality of interaction in a face-to-face traditional classroom. LIKERT scale responses ranged from 5-Much better to 1-Much worse. For this question, mean=3.1. Ten percent of teachers (t=1) reported a level five, which scaled the quality of interaction as “Much better”. Fifty percent of teachers (t=4) reported a level four, which scaled the quality of interaction as “Better”. Ten percent of teachers (t=1) reported a level two, which scaled the quality of interaction as “Worse”. Lastly, twenty-five percent of teachers (t=2) reported a level one, which scaled the quality of interaction as “Much worse”.

Qualitative Analysis

Research question 2 asked, “What factors influence student satisfaction in a blended learning environment with at-risk high school students?” In order to address this question, data were collected in the form of short-response questions on the Blended Learning Student Survey, and from individual and focus group faculty interviews. For the purposes of this study, student respondents were identified by a code detailing their classroom number and sequence (i.e. A1-1). Faculty respondents were coded by their subject area and a sequential number (i.e., English – Teacher 1). Quotes from the respondents will be identified as students (S) and teachers as (T).

Student Participants

The Blended Learning Student Survey allowed for three short-response items that detailed what students liked most and least about blended learning and advice a student new to blended learning education could benefit from.

Advantages of Blended Learning. On assessing what students liked most about blended learning, the overwhelming response was the ability to work at one's own pace. Other positive responses included the organization of the online curriculum, ease of understanding, and classroom teacher assistance as other influential factors in determining student satisfaction with blended education.

"The ability to work at my own pace is what I like best." (S)

"I can work independently." (S)

"It's easy to understand." (S)

"I can get teacher help much more quickly." (S)

"Doing it online is much faster than in my regular school." (S)

Disadvantages of Blended Learning. On assessing what students liked least about blended learning, the responses varied. Some negative responses regarded the curriculum, while others concerned the limited access to the curriculum in addition to the level of difficulty for some of the courses.

"Some of the study guides do not go with the lessons." (S)

"No home access – everything has to completed in school." (S)

"The amount of note-taking is too much." (S)

"Having to wait on the teacher for quiz resets gets frustrating because sometimes they're overwhelmed with other students." (S)

"This school blocks EVERYTHING! Hard to research some of the work because of Internet blockers." (S)

Advice to New Students. The final short-response question on the Blended Learning Student Survey asked the participants to provide valuable advice to a student new to blended learning education. Much of the advice stated is applicable and appropriate to any student new to an alternative learning environment.

"Study and stay focused and you'll do well." (S)

"Discipline yourself and read your notes." (S)

"Do as many quizzes as possible." (S)

"Do not get distracted." (S)

"Keep up a good pace and close lots of classes." (S)

Faculty Participants - Findings

Individual and Focus Group Faculty Interviews

The faculty interviews were essential in answering research questions 1 and 2. The responses provided a deeper understanding of blended education as whole, and blended learning from the daily operations within an educational institution. Seven questions were addressed on the Blended Learning Faculty Survey that allowed participants to be audio-taped for their verbal responses. Individual faculty responses were coded by subject area and a sequential number (i.e., English – T1). Focus group faculty responses were coded by subject area (i.e., English, Math, Science, etc.).

For **question 5**, the Blended Learning Faculty Survey asked, "Is there any additional support, technology, or training you feel could be provided that could help you in your [blended] classroom? Please explain." The responses to this question focused on factors that school administration would need to address and regarded changes that would need to be made school-wide versus in the classroom.

Individual Interview Responses

"More training on how to maneuver through the APEX curriculum." (Science – T2)

"Smartboards." (English – T1)

"Less emphasis on absent students, redundant data collection." (Math – T2)

"Screening [the enrollment process] more rigorously so that students who can actually thrive in this environment are recruited." (English – T2)

Focus Group Interview Responses

"Teachers here need a planning period for at least an hour. This would help with grading papers and making phone calls." (English)

"Yes, more lab sessions and Field trips." (Science)

"Additional textbooks would be helpful." (Math)

For **question 6**, the BLFS asked, "What are the most positive aspects of teaching a course using the blended format?" Ninety percent of the responses recorded focused on student accountability and the ability for students to work at their own pace, thereby determining their academic progress and success in the online course.

Individual Interview Responses

"The APEX curriculum correlates to the Common Core Standards." (Science-T1)

"Teachers continually learning with increased knowledge of changing curriculum." (Social Science – T1)

"Students are given visual breakdown of concepts rather than just hearing them." (English – T 1)

Focus Group Interview Responses

"The ability to help students one-on-one." (All teachers)

"Student accountability." (Math)

"Students are more engaged in what they're doing because they can choose the courses they prefer to work on." (English, Math)

For **question 7**, the Blended Learning Faculty Survey asked, "What are the least positive aspects of teaching a course using the blended format?" The responses varied and were focused on interactions that applied to administration for resolving. The least positive aspects of teaching did not involve students; rather, they were negative aspects that needed to be resolved school-wide.

Individual Interview Responses

"Useless data collection that has no bearing on student success or progress." (Social Science)

"Interactions are somewhat limited." (Science – T1)

Focus Group Interview Responses

."Teachers have to constantly send out students who need help in the subjects their teacher isn't certified in." (English)

"Too much emphasis on absent students and not enough on those students present in class on a daily basis." (Math)

For **question 8**, the Blended Learning Faculty Survey asked, "Has your experience teaching in a blended learning environment influenced your overall career as an educator? If yes, how?" Ninety percent (90%) of faculty participants responded positively that teaching in a blended learning environment influenced their overall career as an educator.

Individual Interview Responses

"A little bit. It has shown me better classroom management techniques." (Science – T2)

"Most definitely as I've only had prior experience as a substitute." (Math – T1)

"Yes, you expand your horizons and learn new strategies and methodology for future experiences." (Science – T1)

"Learned that teaching in public schools is trending backwards." (Math – T2)

Focus Group Interview Responses

"Most definitely! An increased knowledge of other subjects!" (Social Science)

On **question 9** of the Blended Learning Faculty Survey, it asked, "What factors determine student satisfaction in your classroom?" Ninety-five percent (95%) of faculty members interviewed cited attendance and determination as key factors in determining student satisfaction in their classroom.

Individual Interview Responses

"Attending school continuously, confidence in doing quizzes and passing courses." (Social Science –T1)

Focus Group Interview Responses

"Progress, attendance, consistency, and teacher assistance." (Math)

"Focus, determination, fortitude, and desire." (English)

"Celebrating success!" (Science)

On **question 10**, the Blended Learning Faculty Survey asked, "How is student achievement determined in your classroom?" One hundred percent (100%) of teachers agreed that completing quizzes and closing classes are the key essentials to determining student achievement in the classroom. These key essentials are solid pieces of evidence that effectively correlate student satisfaction to student achievement. The higher the overall score a student achieves in a course, the more satisfied they are with their learning and performance.

Individual Interview Responses

"Standardized tests and formative assessments." (Science – T2)

Focus Group Interview Responses

"It is determined by the number of quizzes or classes that are completed." (All teachers)

Lastly, for **question 11,** the Blended Learning Faculty Survey asked, "How would you relate student satisfaction to student achievement in your classroom?" Similar to question #10, the responses were more personal in nature as the teachers provided answers based on how they operate their classrooms.

Individual Interview Responses

"Every student knows where they are and what they need to work on and where they should be based on their academic progress." (English – T1)

"Student satisfaction equates to higher attendance, more quiz completions per day, and more class closures per year, thus greater student achievement." (English – T3)

Summary

Chapter IV addressed the two research questions utilizing surveys from student and teacher participants in addition to interviews and focus groups with classroom teachers. The research questions addressed were:

RQ1: How is student satisfaction measured in a blended learning environment with at-risk high school students?

RQ2: What factors influence student satisfaction in a blended learning environment with at-risk high school students?

This chapter outlined the criteria for measuring student satisfaction in a blended learning environment as well as determining the correlation between student satisfaction and student achievement with at-risk youth in blended learning environment. Analysis of statistical data involving surveys, interviews, and focus groups were essential in providing an in-depth outlook of the advantages and disadvantages of blended education and the specifics of determining student achievement with this alternative form of education. In the final chapter of this dissertation, Chapter V will consist of conclusions and recommendations concerning the implementation and effectiveness of blended learning education with at-risk high school students.

CHAPTER V: CONCLUSIONS

Blended learning is an innovative and progressive alternative to traditional education. It provides at-risk students a second chance to attain an education that is conducive to their learning needs. As described by Thorne (2003) blended learning education is "a way of meeting the challenges of tailoring learning and development to the needs of individuals by integrating the innovative and technological advances offered by online learning with the interaction and participation offered in the best of traditional learning." Blended learning also provides a flexible platform which helps in addressing the diversity seen in students' learning styles and needs via the integration of interactive online techniques with more traditional teaching strategies (Garrison & Kanuka, 2004; Holley & Dobson, 2008).

The purpose of this study was to (a) determine and measure student satisfaction in a blended learning program with at-risk students and (b) assess faculty and student perceptions of blended learning education. Utilizing student and faculty surveys developed by the Research Initiative for Teaching Effectiveness at the University of Central Florida, in Association with the American Association of State Colleges and Universities (2014), two hundred eighty-eight student participants completed *A Blended Course Student Survey* and eight faculty participants completed *A Blended Course Faculty Survey* throughout the course of the study. Questions from both surveys include LIKERT scale and short response questions and were modified by the researcher to fit the needs of the study being conducted at the high school level. In addition, faculty focus group interviews were formed by subject area certification (i.e., English, Social Science, Mathematics, and Science) and conducted by the investigator. The questions for the faculty focus group interviews were extended responses from the *Blended Course Faculty Survey*, in the form of focus group responses and not individual responses.

The following research questions guided this study:

RQ1: How is student satisfaction measured in a blended learning environment with at-risk high school students?

RQ2: What factors influence student satisfaction in a blended learning environment with at-risk high school students?

In order to address these research questions, surveys, interviews, and focus groups were conducted. The data were then transcribed and coded based on emergent themes. The findings of the study were presented in Chapter IV. This chapter will draw conclusions and provide recommendations for each research question.

Addressing research question 1, the trend of decreasing student satisfaction from education in secondary/high school education has drawn attention to the concept of student engagement. A critical factor for student learning and personal development is students' level of engagement with academically purposeful activities (Kuh, 2001). Students' low engagement with academic activities is considered the main reason for dissatisfaction, negative experience, and dropping out of school. Based upon the two-week research study with at-risk students in an alternative learning environment, student satisfaction was measured based upon five criteria: the blended learning instructor, the students in the blended learning classroom, course management, technology, the level of interaction in the blended classroom, and the online curriculum selected for blended education.

Conclusions: The Blended Learning Instructor

The blended learning teacher is unique and serves as an integral part to student success. Three solid conclusions developed from individual and focus group faculty interviews concerning blended education. The first conclusion is that blended teaching provides a disintegrated way of supporting the transmission of education. According to Gonzales (2009),

traditional face-to-face teaching was viewed as providing the basics of a subject and the online space was used to distribute materials and information. The second conclusion of blended teaching regarded the various ways blended learning embedded ways of supporting student learning. Where teaching was seen as promoting student learning, understanding and critical thinking and the online environment was seen as an integral part of the learning process. It provided space for student engagement through collaboration and discussion that were also embedded within the face-to-face aspects of the classroom. Lastly, the third conclusion of blended teaching regarded a dissonant way of combining face-to-face and online teaching. In essence, where face-to-face classes were teacher-focused, teacher conceptions of blended education emphasized active participation in class discussions and applied learning in multiple content areas in the online curriculum.

Four Roles

Recommendations for teachers in the blended learning environment include the acceptance of four roles utilizing Berge's (1995) framework for online teaching. The four roles are pedagogical, social, managerial, and technological. The four categories are still relevant to current teaching conditions (for example, it is capable of including cultural responsiveness) and the framework is also capable of considering teaching on more than a purely technical level and accommodating the emerging research on the influence of teacher beliefs.

In the *pedagogical role*, it implies that blended teaching involves moving away from a content transmission model, where learning is largely teacher- directed and controlled, that is, learning goals, activities and class talk are largely determined by the teacher. Instead, the blended model is presented as learner-centered and features technology-mediated learning which focuses on knowledge construction, authentic activities, and social interaction (Gallini & Barron, 2002). This changes the role of the teacher to one which is more facilitative (Brunner, 2007) and Kaleta et al. (2006, p. 137) comment that "teachers need to be prepared to leave their previous

constructs of what a teacher is behind, and to anticipate how the new model redefines them, their course and their students".

In the second role, the *social role*, it values building relationships and connections through blended learning (McShane, 2004), building online communities (Kaleta et al., 2006), and using face-to-face classes to develop and emphasize social commitment and community (Brunner, 2007). Blended education provides extensive opportunities for accessing and publishing knowledge, and emphasizes more than ever significant but different roles for teachers in relation to working with students to develop their abilities to use these new literacies in a rigorous fashion.

Managerial is the third role in Berge's framework for online teaching that the blended learning teacher employed. In this role teachers identified the heightened visibility attached to the online mode, and the increased need for structure. This raised student expectations and meant that teachers reported engaging in increased levels of reflection, evaluation, planning and organizing in the blended classrooms. Lastly, the fourth role, the *technological role*, ensures that students have access to updated technology and are comfortable with the software and hardware required for completing their online coursework in the blended classroom.

Seven Principles for Good Practice

To ensure the blended learning teacher is successful in their classroom, each faculty participant referenced Chickering and Gamson's Seven Principles for Good Practice in Undergraduate Education, which were highly relevant to blended education with at-risk high school students at the research site where the study was conducted. The eight faculty members that participated in the study wholeheartedly agreed with all seven principles from the review of the literature that promoted success in the blended learning classroom. The principles were: 1) Encourage contact between students and faculty, 2) Develop reciprocity and cooperation among

students, 3) Encourage active learning, 4) Give prompt feedback, 5) Emphasize time on task, 6) Communicate high expectations, 7) and Respect diverse talents and ways of learning.

Teachers will not be replaced with technology and will continue to have a pivotal role in learning. In a blended learning environment there are opportunities to create new learning relationships, which might be more reciprocal and collaborative. These relationships are also based on recognition of the varied expertise of the teacher, in the discipline, and with many students, in the new media. Responding to these and other challenges in blended environments may therefore be a catalyst for transforming practices, however, more research is needed to support this developmental work and it is essential that it include teacher perspectives.

Recommendations for Course Management

Relating Student Satisfaction to Student Achievement

Course management concerns the technical issues associated with the online curriculum program. At the research study site, the school utilized APEX Learning as the online curriculum provider. In order to ensure student success and maintain student satisfaction, it was imperative that APEX Learning incorporate an avenue of the following facets: 1) course structure, 2) communication, 3) policies, 4) assignments/evaluations, 5) technology, 6) and resources available in the online environment.

In the first facet, course structure, each course in APEX Learning provided the student with a detailed course outlining the lessons, study, guides, and activities that the student would be required to complete to ensure success on the online assessments. Course objectives and competencies were also introduced with each lesson, initiating a purpose for the lessons within the course content. In the second facet, communication, online discussions were excluded from the courses in APEX Learning therefor there is no data concerning this facet. Students communicated one-on-one with the teacher or in groups with their peers; however, they were

excluded from using the online discussion board for communication. It is recommended that the incorporation of online discussions can increase the level of interactivity in the blended classroom yet would require an increased workload on the blended classroom teacher due to the monitoring of the online discussions.

The third facet to ensuring student satisfaction and success with course management is the policies, procedures, and course expectations of the blended learning classroom. It is highly recommended that the instructor sets the standards regarding expectations of students in the blended classroom, course prerequisites, technical/research skills, netiquette, late assignments, etc., that will allow for a smooth assimilation into the blended classroom. Failure to provide details regarding course operations and practices will likely cause confusion for students and develop into a stressful environment for students and faculty alike.

The fourth facet for course management recommendations revolves around the assignments and evaluations within the online curriculum program. It is imperative that the expectations for assignments and activities are detailed and students understand how they are graded, and the methods by which grades are determined. In addition, students ought to be given clear instructions, course learning objectives, samples and examples, and/or grading rubrics, and most importantly, due dates to allow for instructor grading and feedback. Also, the minimum competencies for passing of class (i.e., 70%, 80%, etc.) are essential in setting the standards that are acceptable in determining proficiency of learned material in the online curriculum.

The fifth facet to ensuring student satisfaction and success with course management is the technology requirements necessary for optimal learning to take place. In the blended classroom, the main source of curriculum involves the computer that delivers the online instruction. Specifics such as Internet connectivity, hardware, software, browser plug-ins, file management and backups, and anti-virus software are properly working and consistently updated for student and teacher usage. Lastly, the sixth facet to ensuring student satisfaction and success with course

management are the resources (both online and in the classroom) that are supplementary, yet contribute greatly to the success of the at-risk student in the blended learning classroom. In addition, online library resources, in-school tutoring resources, writing labs, and online course support are contributing factors in ensuring student satisfaction and academic achievement with blended education.

Recommendations for Technology

Institutions that implement blended learning education rely heavily upon computers as the entire curriculum is delivered online. It is imperative that technology remains up-to-date with minor IT issues. During the course of the study, such technological issues the students encountered was slow bandwidth due to numerous students on prohibited websites and system failure with main office operations so students were unable to access the Internet. When this problem occurred, many students were quick to leave the school, resulting in low attendance and performance for that day. According to The University of Illinois Online Network (2010), user friendly and reliable technology is critical to a successful online program. However, even the most sophisticated technology is not 100% reliable. Unfortunately, it is not a question of if the equipment used in an online program will fail, but when. When everything is running smoothly, technology is intended to be low profile and is used as a tool in the learning process. However, breakdowns can occur at any point along the system. For example, the server which hosts the program could crash and cut all participants off from the class; a participant may access the class through a networked computer which could go down; individual PCs can have numerous problems which could limit students' access; finally, the Internet connection could fail, or the institution hosting the connection could become bogged down with users and either slow down, or fail all together. In situations like these, the technology is neither seamless nor reliable and it can detract from the learning experience. In addition, the cost of maintaining technology is very expensive and blended learning schools must have a solid budget dedicated to the upkeep of

software, computer hardware, and other necessary materials so that students are able to progress smoothly in their online courses.

Recommendations for Interactivity

Interaction is critical to student satisfaction and achievement in the blended classroom. Interaction provides a sense of collaboration that is often found in the traditional face-to-face classroom, however, the experience is provided on an individual level in the blended classroom. In regards to the online content, interactivity is important because it enables the students to achieve the learning outcomes. Furthermore, attractive well-deigned pages of content within the online curriculum, combined with high-quality videos, will greatly help in keeping students' attention on and enjoyment of the online curriculum materials.

Interactivity is also critical in the blended classroom with at-risk students in regards to three identifiable interactions: teacher-student, student-student, and student-content. It has long been an accepted idea that student learning experiences are far more significant when they are active, interactive, and reflective (Payne, 2007). Some believe that student interactions are an essential condition for learning and that those interactions contribute to deeper learning and more meaning as new information is presented (Ally, 2004, Mayes, 2006). The increase in student learning through interactions can be measured by increased engagement, assessment performance and student satisfaction (Zirkin & Sumler, 1995; Mishra & Juway, 2006).

Regarding the observations of this research study, conclusions can be drawn that learning occurred at a deeper level in a blended learning environment with each identifiable interaction; teacher-student, student-student, and student-content. In a blended learning environment, student involvement interaction not only increased, but also incorporated the involvement of lower ability students who have little history of participation. The blended classroom allowed thinking and reflection to occur at any time within the classroom and fostered student collaboration in a cross-cultural context. Honoring diversity in a blended classroom is critical as at-risk students

have many academic issues yet they all work together in attempting success in their online coursework. Students in a blended environment collaborate more often than students in a traditional or online classroom. In the blended class, though the students are enrolled in a multitude of courses, many of them are enrolled within the same course yet in different lessons within the course. Nonetheless, the students are able to help one another as it is the same content within the course, just varying levels. Diversity is encouraged, enhanced, and recognized as students of all ethnicities an ability levels work together to achieve one common goal: achieving a passing grade in the online course in a blended environment.

Recommendations for Instruction: APEX

The selection of the online curriculum is critical to the success of the blended learning student. The curriculum of any online program must be carefully considered and developed in order to be successful. Many times, in an institution's haste to develop distance education programs, the importance of the curriculum and the need for qualified professionals to develop it is overlooked. Curriculum and teaching methodology that are successful in on-ground instruction will not always translate to a successful online program where learning and instructional paradigms are quite different (Illinois Online Network, 2010). Online curriculum must reflect the use of dialog among students (in the form of written communication), and group interaction and participation. At the study site, APEX Learning was the online curriculum of choice and is also one of the top providers of online education for the state of Florida. APEX learning has been highly regarded as a supportive and accredited online curriculum for blended learning charter schools and offers intensive, regular, honors, and advanced placement courses in their curriculum.

During the two-week study, there were several complaints from both student and faculty participants concerning the APEX curriculum. The first issue was that oftentimes the lessons did not cover material that was presented in the quizzes. This issue resulted in students constantly

failing quizzes and becoming increasingly frustrated with their learning. In response to this issue and subsequently a large volume of complaints from faculty and administration, the company in which the school operates under hired a Director of Curriculum. The Director of Curriculum will work one-on-one with APEX administrators and have elected to change various courses with the online curriculum magnate. The overall goal is to ensure that APEX offers an on-grade level-to-advanced curriculum that allows students to successfully close classes and consistently attain higher-than-average marks (a grade of 80% and higher) in the courses.

Another issue with the APEX curriculum involves the level of interactivity regarding the online coursework. Compared to other online curriculums such as Edgenuity, Florida Connections Academy, and K12 Florida, APEX lacks creativity in which to keep students engaged. Many student participants complained that all the lessons in the APEX curriculum were monotonous, lacked engaging material, and overall dismal in interactivity. However, the other online providers offer content that is highly engaging and has lessons with live teachers and more detailed feedback than the APEX online curriculum. Offering engaging material is critical to sustaining the motivation of the at-risk student that receives their education in a blended learning environment.

In essence, more research is needed to determine other online curriculum providers as well as updated changes with APEX Learning. Online curriculum programs are constantly changing the quality of their content to keep up with the demand of todays' student. Online education is ever changing and progressing and is successful in increasing student achievement with all learners, specifically at-risk students. Education of the highest quality can and will occur in an online program provided that the curriculum has been developed or converted to meet the needs of the online medium.

Conclusions:

The research study provided ample observation of student and faculty participants within a blended learning environment. Many of the recommendations and conclusions were based upon the interactions within the blended learning classroom. The research investigator also observed school-related factors that contributed to student satisfaction and achievement that did not take place inside the classroom. The incorporation of incentives, relationships with staff other than the classroom teacher, and, administrative decisions were all key factors in ensuring student success with an at-risk population in an alternative learning environment.

The first conclusion, the incorporation of incentives, was a great success in motivating students (both participants and non-participants) at the research site. There were bi-weekly and monthly incentives offered by administration and faculty which included gift-cards to restaurants, food vendors, and raffle prizes such as TV's, headphones, and IPads. In the classrooms, teachers would oftentimes reward students with donuts, pizza, cookies, or extended snack breaks. Nonetheless, the greatest incentive consisted of individual student recognition that involved verbal feedback and display of student work in the classroom. In one particular blended classroom, it was print-rich with student achievement in the form of student course completions, Reading Plus performance, positive student conduct, and daily quiz completions. Not surprisingly, this classroom consistently maintained the highest attendance rate due to the positive teacher-student relationships within the classroom.

The second conclusion, relationships with staff other than the classroom teacher, was also a key factor in ensuring student success with an at-risk population in an alternative learning environment. Staff personnel such as the security specialist, family support specialist, reading coach, and ESE specialist all supported the students in their academic success. Due to the small student population (approximately four-hundred and eighty students) and smaller staff (eight teachers, seven support staff, 2 administrators), the atmosphere was very family-like. The

support staff became well acquainted with the students in all classrooms and continually monitored their progress via phone calls, home visits, and provided academic progress monitoring via the online curriculum, APEX Learning, Inc. As a result, more than forty students graduated in June 2015 (compared to fifteen last June 2014), and received scholarships for post-secondary education pursuits.

The third conclusion that was a key factor in ensuring student success with an at-risk population in an alternative learning environment were the administrative decisions that allowed the at-risk students to succeed in the blended learning environment. Administrative decisions often concerned the amount of instances a student can re-enroll in the blended school before final dismissal. At the school where the research study was conducted, there was continuous enrollment and oftentimes, students would withdraw and return to their home school. Nonetheless, months later, those students would be dismissed and return to the alternative blended school and re-enroll, readily accepted by administration, faculty, and staff. In essence, the alternative school provided more than just a second chance to obtain an education, it provided third, fourth, and fifth chances; a safe haven for at-risk students to succeed and continue their high school education.

Summary

Blended learning is steadily gaining a strong foothold in K-12 education as an alternative to traditional educational methods and is becoming a progressive front-runner for specialized learning with at-risk students. Student satisfaction correlates to student achievement as satisfied students are motivated and more likely to accomplish their educational goals. According to Callagher (2008), blended learning is the introduction of the best of online learning tools and strategies into a face-to-face learning environment with an emphasis on engagement through increased participation and interaction. In terms of the online environment, it offers the convenience of online content and interactions which can occur at any time or any place.

Blended learning should therefore provide a more vigorous learning experience for students which cannot be achieved in a traditional face-to-face environment.

Chapter V provided recommendations and conclusions regarding blended learning education and the criterion for effective implementation in a high school setting. Blended learning is a positive disruptive innovation in the field of education. It provides an alternative learning experience in which to obtain an education and has been integral to the success of at-risk youth that did not fare well in traditional learning environments. Data analysis revealed that perceived learner satisfaction was higher than the average indicating students' high satisfaction with the overall blended learning experience. Students seemed satisfied from the way the course's context was delivered to them is considered a very important component for the effectiveness of the course since satisfied students learned more easily, were less likely to drop out of class for non-academic reasons, were more likely to take additional distance courses, and to recommend the course to others (Biner, et al., 1994).

For blended education to succeed it requires engaging content and course design that scaffold's the students' learning. Secondly, there needs to be additional resources both online and in the blended classroom which students can readily access to supplement their learning. Resources must be up-to-date and relevant and can include videos, articles, and web links. Thirdly, the blended learning teacher must employ teaching techniques that may differ from those utilized in a face-to-face course, prepare comprehensive course plans that are flexible and allow modifications, and have a genuine interest and responsiveness to student queries and supply frequent student feedback. Lastly, the student in the blended learning classroom must have certain characteristics such as self-discipline, self-motivation, and a strong work ethic in order to succeed. In addition, the student must also have the ability to manage time and prioritize, set goals that include organization and study skills and the incorporate the belief that

they (the student) have the ability to control their learning and other cognitive outcomes in the blended learning environment.

Blended learning provides the extra direction and added motivation needed by at-risk high school students. According to nationally recognized consultant and speaker on integrating technology in learning, Judith Boettcher (2004) remarks that good education in a blended environment meets the needs of the individual learner; connecting them with content, resources, and the ideas of others; "making it real" by providing authentic assignments and projects, and providing guidance with independent learning skills.

In summary, blended learning education can be a successful alternative to traditional education practices for at-risk high school students. By providing a certain level of autonomy over their learning, at-risk students are able to succeed in the blended learning classroom at a faster rate than in the traditional classroom and attain on par or higher grade averages in equivalent classroom courses and electives. Nonetheless, further research in this area will also help target deeper understanding as we begin to comprehend components of perceived and realized satisfaction of blended learning experiences. Although much larger samples will be needed to do so, looking at effects for course type (field, level of rigor, etc.) will also help to uncover context specific nuances for targeting efforts in this emerging field. Being able to understand the needs of at-risk students, support students in blended courses, and promote successful learning experiences will be critical in the overall success in the blended-learning arena. In addition, with a large influx of blended learning alternative schools coming into existence and the push for more online learning, in time, more research will be provided and substantiate the effectiveness of blended learning education.

REFERENCES

Ackoff, R., & Greenberg, D. (2008). *Turning Learning Right Side Up: Putting Education Back on Track*. Upper Saddle River, New Jersey: Prentice Hall

Adams, J.S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.) *Advances in experimental social psychology* (Vol. 2). New York: Academic Press

Akkoyunlu, B., & Soylu, M. Y. (2008). A Study of Student's Perceptions in a Blended Learning Environment Based on Different Learning Styles. *Educational Technology & Society, 11* (1), 183-193.

Al-Qahtani, A., & Higgins, S.E. (2012). Effects of Traditional, Blended, and E-Learning on students' achievements in higher education. *Journal of Computer Assisted Learning, 29*(3), 220-234

Ally, M. (2004). Foundations of Educational Theory for Online Learning. Retrieved August 15, 2015, from http://cde.athabascau.ca/online_book/ch1.html

American Psychological Association. (1997). *Learner-centered psychological principles: A framework for school redesign and reform*. Washington, DC.

APEX Learning. (2015). Blended Learning Overview. Retrieved from http://www.apexlearning.com/blended-learning/overview

Ark, T., Bailey, J., Ellis, S., & Schneider, C. (2013). Blended Learning Implementation Guide. White Paper Retrieved February 4, 2015 from http://digitallearningnow.com/site/uploads/2013/02/DLNSmartSeries-BL-paper_2012-02-05a.pdf

Atkinson, G. & Bouma, G. (1995). *A handbook of social science research,* 2nd ed., Oxford: Oxford University Press.

Biner, P. M., Dean, R. S., & Mellinger, A. E. (1994). Factors underlying distance learner satisfaction with televised college-level courses. T*he American Journal of Distance Education, 8*(1), 60-71.

Biner, P. M., Summers, M., Dean, R. S., Bink, M. L., Anderson, J. L., & Gelder, B. C. (1996) Student satisfaction with interactive telecourses as a function of demographic variables and prior telecourse experience. *Distance Education, 17*(1), 33-43.

Bonk, C., & Dennen, V. (2003). Frameworks for research, design, benchmarks, training, and pedagogy in web-based distance education. In M. Moor & W. Anderson (Eds.), *Handbook of Distance Education* (pp. 331-348). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Bower, B. L., & Kamata, A. (2000). Factors influencing student satisfaction with online courses. *Academic Exchange Quarterly, 4*(3), 52-56.

Bresciani, M.J,, Zelna, C.L. and Anderson, J.A. (2004). Assessing Student Learning and Development: A Handbook for Practitioners. Washington, D.C.: National Association of Student Personnel Administrators.

Bush, L. (2004). Constructing an Online Syllabus. Retrieved October 26, 2006, from the Center for Learning and Teaching Excellence website.

Callagher, M. (2008). How Can Student Interactivity be Enhanced through the use of a Blended Learning Approach? Retrieved August 15, 2015 from http://www.core-ed.org/sites/efellows.org.nz/files/Research_Report_-_Mark_Callagher.pdf

Carneige Mellon University. (2014). Whys and Hows of Assessment. Retrieved June 16, 2014 from http://www.cmu.edu/teaching/assessment/basics/formative-summative.html

Christensen, C., Horn, M., & Johnson, C. (2008). *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*. New York, NY: McGraw-Hill

Chong, S. M. (1998). Models of asynchronous computer conferencing for collaborative learning in large college classes. In C. J. Bonk & K. S. King (Eds.), *Electronic collaborators: Learner-centered technologies for literacy, apprenticeship, and discourse* (pp. 157-182). Mahwah, NJ: Lawrence Erlbaum Associates.

Condry, J. (1977). Enemies of exploration: Self-initiated versus other-initiated learning. *Journal of Personality and Social Psychology*, *35*(7), 459–477.

Crotty, J. (2013). *Motivation Matters: 40% of High School Students Chronically Disengaged from School.* Center for Education Policy White Paper.

Cunningham, J. (2012). Student Achievement. National Conference of State Legislators Retrieved from http://www.ncsl.org/documents/educ/CharterSchoolStudentAchievement.pdf

Deci, E.L., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Dreon, O. (2013). Applying the Seven Principles for Good Practice to the Online Classroom. Retrieved December 10, 2014 from http://www.facultyfocus.com/articles/online-education/applying-the-seven-principles-for-good-practice-to-the-online-classroom/

Duke, N. K., & Pearson, P. D. (2002). Effective practices for developing reading comprehension. In *What research has to say about reading instruction*. International Reading Association, 205–242. Newark, DE

Editors, (2005). Course Design, Monitoring Help Ensure Academic Honesty. Online Classroom. Pgs 1-3, 2p.

Editors, (2005). Interactive Syllabus Improves Course Accessibility. Online Classroom, p.4-8.

Educational Research Institute of America. (2010). Florida Virtual School - Conspiracy Code: Intensive Reading. Retrieved May 22, 2014 from http://www.air.org/topic/education

Feller, W. (2013). Blended Learning and the K12 Classroom. Retrieved February 1, 2015 from http://www.hmhco.com/~/media/sites/home/Teachers/Files/HMH-CDE_Issue%20Brief_Blended%20Learning.PDF

Ferris State University. (2010). Informal Student Survey: What does Success Mean to You? Retrieved November 12, 2014 from http://www.ferris.edu/HTMLS/administration/president/sparc/meetings/docs/student_success_means_2010.pdf

Finley, L., & Hartman, D. (2004). Institutional Change and Resistance: Teacher preparatory faculty and technology integration. *Journal of Technology and Teacher Education*, *12*(3), 319-337.

Florida Department of Education. (2011). Pathways to Success: College and Career Readiness. Retrieved June 16, 2014 from http://www.fldoe.org/bii/studentpro/pdf/PathwaystoSuccess.pdf

Florida Department of Education. (2014). Florida's High School Cohort Graduation Rate. Retrieved December 23, 2014 from http://www.fldoe.org/accountability/data-sys/edu-info-accountability-services/pk-12-public-school-data-pubs-reports/students.stml

Fong, J., & Wang, F. (2007). Blended Learning. Symposium on Blended Learning. Retrieved from file:///C:/Users/dmccoy/Downloads/0fcfd51447b4a53b77000000.pdf

Friesen, n. (2012). Defining Blended Learning. Retrieved January 8, 2015 from http://learningspaces.org/papers/Defining_Blended_Learning_NF.pdf

Garrison, D. R., & Anderson, T. (2000). Transforming and enhancing university teaching: stronger and weaker technological influences. In T. Evans & D. Nation (Eds.), *Changing university teaching: reflections on creating educational technologies* (pp. 24-33). London: Kogan Page.

Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education, 13*(1-2), 31-36.

Gerbic, P. (2011). Teaching using a blended learning approach – what does the literature tell us?. Retrieved June 24, 2011 from http://onlineblendedpdandprep.wikispaces.com/file/view/Gerbic.pdf

Gemim, B., & Watson, J. (2008). Using Online Learning for At-Risk Students and Credit Recovery. Retrieved from http://files.eric.ed.gov/fulltext/ED509625.pdf

Graham, C. R., Allen, S., & Ure, D. (2003). Blended learning environments: A review of the research literature. Unpublished manuscript, Provo, UT.

Hess, K., & Young, C. (n.d.). 11 Strategies for Managing Your Online Courses. Retrieved July 10, 2015 from http://www.facultyfocus.com/wp-content/uploads/images/report-11-strategies-for-managing-online-courses1.pdf

Hudson, T., & Woolley-Wilson, J. (2015). 6 Models of Blended Learning. Retrieved from http://www.dreambox.com/blog/6-models-blended-learning

Jugdev, K., Hutchinson, M., & Lynes, S. (2006). The ABC's of Online Course Syllabi: Anticipate, Build on Objectives, and Collaborate. *Distance Education Report, 10*(9), p. 6.

Keeling, R.P. (2006). *Learning Reconsidered 2: Implementing a Campuswide Focus on the Student Experience.* Washington, D.C.: National Association of Student Personnel Administrators, American College Personnel Association, and five other associations

Keller, J.M. (1984). The use of the ARCS model of motivation in teacher training. In K.S.A.J. Trott (Ed.), *Aspects of educational technology: Volume XVII: Staff development and career updating* (pp. 140–145). London: Kogan Page.

Keller, J.M. (2008). An integrative theory of motivation, volition, and performance. *Technology, Instruction, Cognition, and Learning, 6*(2).

Keller, J.M., Deimann, M., & Liu, Z. (2005). Effects of integrated motivational and volitional tactics on study habits, attitudes, and performance. In *Proceedings of the Annual Meeting of the Association for Educational Communications and Technology,* Orlando, FL. Retrieved June 23, 2014, from http://mailer.fsu.edu/~jkeller/Articles/Keller,%20Deimann,%20Liu%20Effects%20of%20integrated.pdf

Kochhar-Bryant, C. (2002). *Profiling success in alternative education*. George Washington University Press.

Koller, D. (2011). *Death Knell for the Lecture: Technology as a Passport to Personalized Education.* Retrieved October 23, 2015 from http://www.nytimes.com/2011/12/06/science/daphne-koller-technology-as-a-passport-to-personalized-education.html?_r=1

Kuh, G. D. (2001). Assessing what really matters to student learning: Inside the National Survey of Student Engagement. *Change, 33*(3), 10-17.

Maehr, M.L. (1976). Continuing motivation: An analysis of a seldom considered educational outcome. *Review of Educational Research, 46*(3), 443–462.

Mayes, T. (2006). *Theoretical Perspectives on Interactivity in elearning.* Interactions in Online Educations, New York, Routledge

McQuiggan, C. A. (2007). The role of faculty development in online teaching's potential to question teaching beliefs and assumptions. *Online Journal of Distance Learning Administration, 10*(3).

Mishra, S. and Juwah, C. (2006). *Interactions in Online Discussions.* Interactions in Online Educations, New York, Routledge

Montgomery County Intermediate Unit. (2015). Hybrid Learning Academy at Anderson. Retrieved from http://andersoneducation.org/Programs/HybridLearning.aspx

Oblinger, D. G. (2003). Boomers, gen-xers, and millenials: Understanding the new students. *Educause, 38(4),* 37-47.

Oblinger, D. G. (2005). Educating the net generation. Retrieved December 20, 2008, from www.educause.edu/educatingthenetgen

Pajo, K., & Wallace, C. (2001). Barriers to the uptake of web-based technology by university teachers. *The Journal of Distance Education, 16*(1), 70-84.

Palloff, R.M., & Pratt, K. (2003). Constructing an Online Syllabus. San Francisco, CA: Jossey-Bass.

Poon, J. (2013). Blended Learning: An Institutional Approach for Enhancing Students' Learning Experiences. Retrieved November 7, 2014 from http://jolt.merlot.org/vol9no2/poon_0613.htm

Preece R. (1994). *Starting research: an introduction to academic research and dissertation writing*. London: Pinter

Public Impact. (2013). A Better Blend: A Vision for Boosting Student Outcomes with Digital Learning. Retrieved November 7, 2014 from http://opportunityculture.org/wp-content/uploads/2013/04/A_Better_Blend_A_Vision_for_Boosting_Student_Outcomes_with_Digital_Learning-Public_Impact.pdf

ReadingPlus. (2015). ReadingPlus: Online Reading Intervention. Retrieved October 30, 2015, from https://www.readingplus.com/

Redmond, P. (2011). From face-to-face teaching to online teaching: Pedagogical transitions. In G. Williams, P. Statham, N. Brown & B. Cleland (Eds.), *Changing Demands, Changing Directions. Proceedings ascilite Hobart 2011*. (pp.1050-1060).

Rossett, A. (2005). Moving Online: How to Make Your Web Dream a Reality. Training and Development, p.14-15.

Shenton, A. (2003). Strategies for ensuring trustworthiness in qualitative research projects. *Journal of Education for Information, 22 (3*), 63-75.

Smith, N. (2013). Face-toFace vs. Blended Learning: Effects on Secondary Students Perceptions and Performance. Retrieved from http://www.sciencedirect.com/science/article/pii/S1877042813029443

Staker, H. (2011). The Rise of K-12 Blended Learning: Profiles of emerging models. Retrieved November 8, 2011 from http://www.innosightinstitute.org/innosight/wp-content/uploads/2011/05/The-Rise-of-K-12-Blended-Learning.pdf

Sull, E. (2006). The 10 Key Rules for Managing Time in Online Teaching, Online Classroom. p 6-7.

Sum, A., Khatiwada, I., &McLaughlin, J. (2009). The Consequences of Dropping Out of High School. Retrieved February 16, 2015 from http://www.northeastern.edu/clms/wp-content/uploads/The_Consequences_of_Dropping_Out_of_High_School.pdf

The School District of Palm Beach County. (2014). EDW: Educational Data Warehouse. Retrieved June 8, 2014 from http://www.palmbeachschools.org/edw/access.asp

Thomas, R., Breese-Vitelli, J., & Vitelli, M. (2012). *An analysis of the holistic model for blended learning versus face-to-face instructions used to teach at-risk students in an alternative school.* Education Special Interest Group from the AITP.

U.S. Department of Education. (2012). National Center for Education Statistics: Trends in High School Dropout and Completion Rates in the U.S. Retrieved from http://nces.ed.gov/pubs2012/2012006.pdf

University of Central Florida. (2014). Benefits of Blended Learning. Retrieved January 15, 2015 from https://blended.online.ucf.edu/about/benefits-of-blended-learning/

University of Central Florida. (2014). Blended Course Faculty Survey. Retrieved January 10, 2015 from http://blended.online.ucf.edu/evaluation-resources/survey-instruments/

University of Central Florida. (2014). Blended Course Student Survey. Retrieved January 10, 2015 from http://blended.online.ucf.edu/evaluation-resources/survey-instruments/

University of North Carolina-Charlotte. (2014). The Seven Principles for Good Practice in Undergraduate Education. Retrieved November 9, 2014 from http://teaching.uncc.edu/learning-resources/articles-books/best-practice/education-philosophy/seven-principles

University of Wisconsin-Milwaukee. (2014). About Hybrid. Retrieved June 17, 2014 from http://www4.uwm.edu/ltc/hybrid/about_hybrid/index.cfm

Vail, K. (2006). Back to Basics: How to Run a First-Rate Program. *Distance Education Report, 10*(3), p 5-6.

Vaughan, N. D. (2010). A blended community of inquiry approach: Linking student engagement and course redesign. *The Internet and Higher Education, 13*(1-2), 60-65.

Webb, E. J., Campbell, D. T., Schwartz, R. D., and Sechrest, L. (1966). *Unobtrusive Measures: Nonreactive Measures in the Social Sciences*. Chicago: Rand McNally.

Zirkin, B., & Sumler, D. (1995). Interactive or non-interactive? That is the question! An annotated bibliography. Journal of Distance Education, 10(1), pgs.95-112.

White, D. L., & Kochhar-Bryant, C. A. (2005, September). *Foundation for Alternative Education*. Hamilton Fish Institute Reports and Essays Serial. Washington, DC: Hamilton Fish Institute, The George Washington University, p. 2.

Wu, H., Tennyson, R. D., & Hsia, T. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers and Education, 55*, 155-164.

Zirkin, B., & Sumler, D. (1995). Interactive or non-interactive? That is the question! An annotated bibliography. Journal of Distance Education, 10(1), pgs.95-112.

Appendix A: A Blended Course Student Survey

Please answer the following questions as clearly as you can by checking the box or line, as appropriate.

School:_____ **Age**:_____ **Gender**:_____

To be completed by Research Investigator	African American/ Black	American Indian/ Alaskan Native	Asian	Hispanic/ Latino	Native Hawaiian/ Other Pacific Islander	White	Other
Ethnicity							

To be completed by Research Investigator	**Freshman**	**Sophomore**	**Junior**	**Senior**
Academic Standing				

To be completed by Research Investigator	**3.5-4.0**	**3.0-3.49**	**2.5-2.99**	**1.5-1.99**	**Less than 1.5**
Current Overall GPA					

Have you ever attended a blended learning prior to enrolling at Quantum High School?
NO____
If YES, name of school? _____

PART II: Student Satisfaction Survey Form (SSSF)

		5 = Strongly satisfied	4= Satisfied	3 = Neutral	2= Dissatisfied	1 = Strongly dissatisfied
ITEM	**INTERACTION**					
1	The way I interact with other students in the blended learning classroom.					
2	My participation in the blended learning classroom.					
	INSTRUCTION: APEX					
3	The use of blended learning technology in this school encourages me to learn independently.					
4	The level of effort the APEX curriculum requires.					
5	Blended learning helps me better understand course material					
	TEACHER					
6	The teacher makes me feel that I am a true member of the class					
7	The accessibility and availability of the teacher.					
8	Communication of classroom expectations and procedures					
9	Feedback on evaluation of tests and other assignments					
10	I enjoy learning from the teacher					
	COURSE MANAGEMENT					
11	I am able to utilize textbooks, dictionaries, and online research to help with my courses					
12	Assigning of necessary courses needed to stay on track and attain my high school diploma					

13	The exclusion of certain course items such as CST's, discussions, and journals allows for a flexible curriculum that ensures my success in the course					
	TECHNOLOGY					
14	The videos in the APEX program are clear and comprehensive					
15	The technology used for blended teaching is reliable.					
	OVERALL					
16	This school provides the resources necessary for students to succeed in blended courses					
17	My overall learning experience in a blended education program					
18	My motivation to succeed					
19	My overall progress with online courses					
	STUDENT GOALS: *Reflecting on your goals (look at your dashboard) and the progress made thus far this year, list your goals and rate your level of satisfaction with each.*	5 = Strongly satisfied	4= Satisfied	3 = Neutral	2= Dissatisfied	1 = Strongly dissatisfied
20 (a)	Goal 1:					
20 (b)	Goal 2:					
20 (c)	Goal 3:					
20 (d)	Goal 4:					
20 (e)	Goal 5:					

PART III: Student input

1. **What do you like most about online/blended courses?**
2. **What do you like least about online/blended courses?**
3. **What advice would you give to a student new to APEX and/or blended learning?**

Appendix B: A Blended Course Faculty Survey

PART I: Please tell us about yourself

Name: _____Gender:_____ Male _____ Female

Total number of years teaching: **_____**

Subject Area Certifications:

_____ _____ _____

_____ _____ _____

Ethnicity (check one):

_____ African American/Black _____ American Indian/Alaskan Native

_____ Asian _____ Hispanic/Latino_____ Native Hawaiian/Other Pacific Islander

_____ White

PART II

We would like to ask you some questions regarding your teaching experience. Please answer the questions that apply to you, and your experience with the blended format.

1. On average, how satisfied you have been with the APEX curriculum?

Very Satisfied 5	Generally Satisfied 4	Neutral 3	Generally Dissatisfied 2	Very Dissatisfied 1

If, on question 1, you indicated you have been dissatisfied with your blended experience, what do you feel has contributed most to your dissatisfaction?

_____

_____

2.How would you rate the quality of the online APEX curriculum as compared to traditional school curriculum?

Much better 5	Better 4	About the same 3	Worse 2	Much worse 1

Why?_____

3. Consider the amount of interaction in your blended class. How would you say it compared with the amount of interaction in a face-to-face traditional classroom?

Increased 5	Somewhat increased 4	About the same 3	Somewhat decreased 2	Decreased 1

Explain:_____

4. Consider the quality of interaction in your classroom. How would you say it compared with the quality of interaction in a face-to-face traditional classroom?

Much Better 5	Better 4	About the same 3	Worse 2	Much worse 1

Explain:_____

5. Is there any additional support, technology, or training you feel could be provided that could help you in your classroom? Please explain.

6. What are the most positive aspects of teaching a course using the blended format?
7. What are the least positive aspects of teaching a course using the blended format?

8. Has your experience teaching in a blended learning environment influenced your overall career as an educator? If yes, how?

9. What factors determine student satisfaction in your classroom?

10. How is student achievement determined in your classroom?

11. How would you relate student satisfaction to student achievement in your classroom?

Additional comments / suggestions / concerns?

_____

Appendix D: Student Informed Consent Form

Lynn University

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR VOLUNTARY CONSENT

STUDENT INFORMED CONSENT

PROJECT TITLE: *Evaluating Faculty and Student Perceptions of Blended Education to determine and measure Student Satisfaction in a Blended Learning Program with At-Risk high school students*

Project IRB Number: **2015-006** Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I, Daquia McCoy , am a doctoral student at Lynn University. I am studying Educational Leadership with a specialization in Higher Education / Teacher Preparation. One of my degree requirements is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT:

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator Daquia McCoy will answer all of your questions. Ask questions about anything you don't understand before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your participation in this study. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You acknowledge that you are at least 18 years of age, and that you do not have medical problems or language or educational barriers that precludes understanding of explanations contained in this authorization for voluntary consent.

PURPOSE OF THIS RESEARCH STUDY: The study is to (a) assess student satisfaction in relation to student achievement in a blended learning environment with at-risk high school students, and (b) evaluate faculty and student perceptions of blended learning education. There will be approximately 250 and more people invited to participate in this study. Participants will include students currently enrolled at Quantum High School as well as classroom teachers.

PROCEDURES

Survey

Your voluntary participation will involve completion of a Blended Course Student Survey (BCSS). The BCSS is a student satisfaction survey designed to assess student perceptions of blended learning education in relation to student satisfaction and student achievement. The BCSS has three parts. The first part will include demographic data. The second part will consist of LIKERT scale responses ranging from 1-Highly Satisfied to 5-Highly Dissatisfied. The third part will consist of student response in short-answer format. The survey should take 10 – 15 minutes to complete.

POSSIBLE RISKS OR DISCOMFORT: This study involves no risk. In addition, participation in this study requires a minimal amount of your time and effort.

POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research. But knowledge may be gained which may help the researcher value a deeper understanding of student satisfaction in relation to student achievement in a blended learning environment. As a progressive frontrunner to traditional education, blended learning has achieved acknowledgement in ensuring a viable and successful alternative for at-risk students pursuing a high school diploma.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

CONFIDENTIALITY
Every effort will be made to maintain confidentiality. Your identity in this study will be treated as confidential. Only the researcher DAQUIA MCCOY will know who you are. During the data analysis, you will be given a fictitious name (e.g., Student 1: Class 1 – Male). Data will be coded with that fictitious name.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study. All the data gathered during this study, which were previously described, will be kept strictly confidential by the researcher. Data will be stored in password enabled locked files in the researchers computer and destroyed at the end of the research. All information will be held in strict confidence and will not be disclosed unless required by law or regulation.

RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Daquia McCoy who may be reached at: [redacted] and Dr. Joseph Melita, faculty advisor who may be reached at: [redacted]. For any questions regarding your rights as a research subject, you may call Dr. Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [redacted]. If any problems arise as a result of your participation in this study, please call the Principal Investigator Daquia McCoy and the faculty advisor Dr. Joseph Melita immediately. A copy of this consent form will be given to you.

AUTHORIZATION FOR VOLUNTARY CONSENT:

I have read and understand this consent form. I have been given the opportunity to ask questions, and all my questions have been answered to my satisfaction. I have been assured that any future questions that may arise will be answered. I understand that all aspects of this project will be carried out in the strictest of confidence, and in a manner in which my rights as a human subject are protected. I have been informed of the risks and benefits. I have been informed in advance as to what my task(s) will be and what procedures will be followed.

I voluntarily choose to participate. I know that I can withdraw this consent to participate at any time without penalty or prejudice. I understand that by signing this form I have not waived any of my legal rights. I further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws. I understand that I will receive a copy of this form.

_____

Participant's printed name

_____ _____

Participant's signature Date

INVESTIGATOR'S AFFIDAVIT: I have carefully explained to the subject the nature of the above project. The person participating has represented to me that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. I hereby certify that to the best of my knowledge the person who is signing this consent form understands clearly the nature, demands, benefits, and risks involved in his/her participation and his/her signature is legally valid.

_____

Signature of Investigator Date of IRB Approval: May 29, 2015

Appendix E: Faculty Informed Consent Form

Lynn University

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR VOLUNTARY CONSENT

FACULTY INFORMED CONSENT

PROJECT TITLE: *Evaluating Faculty and Student Perceptions of Blended Education to determine and measure Student Satisfaction in a Blended Learning Program with At-Risk high school students*

Project IRB Number: **2015-006** Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I, Daquia McCoy , am a doctoral student at Lynn University. I am studying Educational Leadership with a specialization in Higher Education / Teacher Preparation. One of my degree requirements is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT:

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator Daquia McCoy will answer all of your questions. Ask questions about anything you don't understand before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your participation in this study. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You acknowledge that you are at least 18 years of age, and that you do not have medical problems or language or educational barriers that precludes understanding of explanations contained in this authorization for voluntary consent.

PURPOSE OF THIS RESEARCH STUDY: The study is to (a) assess student satisfaction in relation to student achievement in a blended learning environment with at-risk high school students, and (b) evaluate faculty and student perceptions of blended learning education. There will be approximately 250 and more people invited to participate in this study. Participants will include students currently enrolled at Quantum High School as well as classroom teachers.

PROCEDURES

Survey

Your voluntary participation will involve completion of a Blended Course Student Survey (BCSS). The BCSS is a student satisfaction survey designed to assess student perceptions of blended learning education in relation to student satisfaction and student achievement. The BCSS has three parts. The first part will include demographic data. The second part will consist of LIKERT scale responses ranging from 1-Highly Satisfied to 5-Highly Dissatisfied. The third part will consist of student response in short-answer format. The survey should take 10 – 15 minutes to complete.

Interviews – Individual and Focus Group

From the short response items on the Blended Course Faculty Survey, participants will be involved in individual interviews that will allow them to expand upon their written responses. The individual interviews will take 15 minutes to complete and will also be audio-taped to ensure complete accuracy

when transcribed by the researcher. In addition to individual interviews, faculty will also be involved in focus group interviews by subject area. The focus group interviews will allow the researcher to gain a deeper understanding of the online curriculum that is utilized in the blended learning environment in addition to focusing on particular subject areas that achieve the greatest success with blended learning. The focus group interviews will take approximately 30 minutes.

Audio-tapes
All interviews will be audio-taped. Audio-taping will allow the researcher to accurately document participants' words during the interviews. It will also allow the researcher to study the content of the interviews at a later time during the study. Though the participants will not be anonymous to the researcher, their names will be changed to preserve the anonymity to others. Only the researcher will have access to the audio tapes. The researcher will listen to and transcribe all audiotapes verbatim.

POSSIBLE RISKS OR DISCOMFORT: This study involves no risk. In addition, participation in this study requires a minimal amount of your time and effort.

POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research. But knowledge may be gained which may help the researcher value a deeper understanding of student satisfaction in relation to student achievement in a blended learning environment. As a progressive frontrunner to traditional education, blended learning has achieved acknowledgement in ensuring a viable and successful alternative for at-risk students pursuing a high school diploma.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

CONFIDENTIALITY
Every effort will be made to maintain confidentiality. Your identity in this study will be treated as confidential. Only the researcher DAQUIA MCCOY will know who you are. During the data analysis, you will be given a fictitious name (e.g., Student 1: Class 1 – Male). Data will be coded with that fictitious name.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study. All the data gathered during this study, which were previously described, will be kept strictly confidential by the researcher. Data will be stored in password enabled locked files in the researchers computer and destroyed at the end of the research. All information will be held in strict confidence and will not be disclosed unless required by law or regulation.

RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Daquia McCoy who may be reached at: [redacted] and Dr. Joseph Melita, faculty advisor who may be reached at: [redacted]. For any questions regarding your rights as a research subject, you may call Dr. Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [redacted]. If any problems arise as a result of your participation in this study, please call the Principal Investigator Daquia McCoy and the faculty advisor Dr. Joseph Melita immediately. A copy of this consent form will be given to you.

AUTHORIZATION FOR VOLUNTARY CONSENT:

I have read and understand this consent form. I have been given the opportunity to ask questions, and all my questions have been answered to my satisfaction. I have been assured that any future questions that may arise will be answered. I understand that all aspects of this project will be carried out in the strictest of confidence, and in a manner in which my rights as a human subject are protected. I have been informed of the risks and benefits. I have been informed in advance as to what my task(s) will be and what procedures will be followed.

I voluntarily choose to participate. I know that I can withdraw this consent to participate at any time without penalty or prejudice. I understand that by signing this form I have not waived any of my legal rights. I further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws. I understand that I will receive a copy of this form.

_____

Participant's printed name

_____ _____

Participant's signature Date

I consent to be audio taped (include if applicable – if video-tape, include):

_____ _____

Participant's signature Date

INVESTIGATOR'S AFFIDAVIT: I have carefully explained to the subject the nature of the above project. The person participating has represented to me that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. I hereby certify that to the best of my knowledge the person who is signing this consent form understands clearly the nature, demands, benefits, and risks involved in his/her participation and his/her signature is legally valid.

_____

Signature of Investigator Date of IRB Approval: May 29, 2015

Appendix F: Parental Informed Consent Form

Lynn University

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR VOLUNTARY CONSENT

PARENTAL INFORMED CONSENT

PROJECT TITLE: *Evaluating Faculty and Student Perceptions of Blended Education to determine and measure Student Satisfaction in a Blended Learning Program with At-Risk high school students*

Project IRB Number: **2015-006** Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I, Daquia McCoy , am a doctoral student at Lynn University. I am studying Educational Leadership with a specialization in Higher Education / Teacher Preparation. One of my degree requirements is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT:

Your child is invited to participate in a research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator Daquia McCoy will answer all of your questions. Ask questions about anything you don't understand before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your child's participation in this study. Your child's participation is entirely voluntary and you can refuse to have your child participate without penalty or loss of benefits to which your child is otherwise entitled. You acknowledge that you are the parent/guardian, at least 18 years of age, and that you do not have medical problems or language or educational barriers that precludes understanding of explanations contained in this authorization for voluntary consent.

PURPOSE OF THIS RESEARCH STUDY: The purpose of this study is to (a) assess student satisfaction in relation to student achievement in a blended learning environment with at-risk high school students, and (b) evaluate faculty and student perceptions of blended learning education. There will be approximately 250 and more people invited to participate in this study. Participants will include students currently enrolled at Quantum High School as well as classroom teachers.

PROCEDURES

Survey

Your child's voluntary participation will involve completion of a Blended Course Student Survey (BCSS). The BCSS is a student satisfaction survey designed to assess student perceptions of blended learning education in relation to student satisfaction and student achievement. The BCSS has three parts. The first part will include demographic data. The second part will consist of LIKERT scale responses ranging from 1-Highly Satisfied to 5-Highly Dissatisfied. The third part will consist of student response in short-answer format. The survey should take 10 – 15 minutes to complete.

POSSIBLE RISKS OR DISCOMFORT: This study involves no risk. In addition, participation in this study requires a minimal amount of your child's time and effort.

POSSIBLE BENEFITS: There may be no direct benefit to your child in participating in this research. Nonetheless, knowledge may be gained which may help the researcher value a deeper understanding of student satisfaction in relation to student achievement in a blended learning environment. As a progressive frontrunner to traditional education, blended learning has achieved acknowledgement in ensuring a viable and successful alternative for at-risk students pursuing a high school diploma.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your child's participation in this research. There are no costs to you or your child as a result of your child's participation in this study.

CONFIDENTIALITY
Every effort will be made to maintain confidentiality. Your child's identity in this study will be treated as confidential. Only the researcher DAQUIA MCCOY will know who they are. During the data analysis, your child will be given a fictitious name (e.g., Student 1: Class 1 – Male). Data will be coded with that fictitious name.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your child's individual privacy will be maintained in all publications or presentations resulting from this study. All the data gathered during this study, which were previously described, will be kept strictly confidential by the researcher. Data will be stored in password enabled locked files in the researchers computer and destroyed at the end of the research. All information will be held in strict confidence and will not be disclosed unless required by law or regulation.

RIGHT TO WITHDRAW: You are free to choose whether or not to allow your child to participate in this study. There will be no penalty or loss of benefits to your child which they are otherwise entitled to if you choose not to have them participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your child's participation in it, either now or any time in the future, will be answered by Daquia McCoy who may be reached at: [redacted] and Dr. Joseph Melita, faculty advisor who may be reached at: [redacted]. For any questions regarding your rights as a research subject, you may call Dr. Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [redacted]. If any problems arise as a result of your participation in this study, please call the Principal Investigator Daquia McCoy and the faculty advisor Dr. Joseph Melita immediately. A copy of this consent form will be given to you.

AUTHORIZATION FOR VOLUNTARY CONSENT:

I have read and understand this consent form. I have been given the opportunity to ask questions, and all my questions have been answered to my satisfaction. I have been assured that any future questions that may arise will be answered. I understand that all aspects of this project will be carried out in the strictest of confidence, and in a manner in which my rights as a human subject are protected. I have been informed of the risks and benefits. I have been informed in advance as to what my task(s) will be and what procedures will be followed.

Your signature indicates that you have read and understand the information provided above, and that you willingly agree to allow your child to participate. You and/or your child can withdraw this consent to participate at any time without penalty or prejudice. You understand that by signing this form you have not waived any of your legal rights and further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws. You will receive a copy of this form.

_____

Student name

_____

Parent/Guardian printed name

_____

Parent/Guardian signature Date

INVESTIGATOR'S AFFIDAVIT: I have carefully explained to the subject the nature of the above project. The person participating has represented to me that he/she is the parent/guardian, at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. I hereby certify that to the best of my knowledge the person who is signing this consent form understands clearly the nature, demands, benefits, and risks involved in their child's participation and his/her signature is legally valid.

_____

Signature of Investigator Date of IRB Approval: May 29, 2015

Appendix G: Minor Assent Form

Lynn University

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR VOLUNTARY CONSENT

MINOR ASSENT

PROJECT TITLE: *Evaluating Faculty and Student Perceptions of Blended Education to determine and measure Student Satisfaction in a Blended Learning Program with At-Risk high school students*

Project IRB Number: **2015-006** Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I, Daquia McCoy , am a doctoral student at Lynn University. I am studying Educational Leadership with a specialization in Higher Education / Teacher Preparation. One of my degree requirements is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT:

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator Daquia McCoy will answer all of your questions. Your participation is entirely voluntary.

PURPOSE OF THIS RESEARCH STUDY: The study is to (a) assess student satisfaction in relation to student achievement in a blended learning environment with at-risk high school students, and (b) evaluate faculty and student perceptions of blended learning education.

PROCEDURES

Survey

Your voluntary participation will involve completion of a Blended Course Student Survey (BCSS). The BCSS is a student satisfaction survey designed to assess student perceptions of blended learning education in relation to student satisfaction and student achievement. The BCSS has three parts. The first part will include demographic data. The second part will consist of LIKERT scale responses ranging from 1-Highly Satisfied to 5-Highly Dissatisfied. The third part will consist of student response in short-answer format. The survey should take 10 – 15 minutes to complete.

POSSIBLE RISKS OR DISCOMFORT: This study involves no risk. In addition, participation in this study requires a minimal amount of your time and effort.

POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research. But knowledge may be gained which may help the researcher value a deeper understanding of student satisfaction in relation to student achievement in a blended learning environment. As a progressive frontrunner to traditional education, blended learning has achieved acknowledgement in ensuring a viable and successful alternative for at-risk students pursuing a high school diploma.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

CONFIDENTIALITY
Every effort will be made to maintain confidentiality. Your identity in this study will be treated as confidential. Only the researcher DAQUIA MCCOY will know who you are. During the data analysis, you will be given a fictitious name (e.g., Student 1: Class 1 – Male).
All the data gathered during this study, which were previously described, will be kept strictly confidential by the researcher.

RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Daquia McCoy who may be reached at: [redacted].

AUTHORIZATION FOR VOLUNTARY CONSENT:

I have read and understand this consent form. I voluntarily choose to participate. I know that I can withdraw this consent to participate at any time. I have been given the opportunity to ask questions, and all my questions have been answered to my satisfaction. I understand that I will receive a copy of this form.

_____
Participant's printed name

_____ _____
Participant's signature Date

INVESTIGATOR'S AFFIDAVIT: I have carefully explained to the subject the nature of the above project. The person participating has represented to me that he/she is a minor (14 – 17 years old), and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. I hereby certify that to the best of my knowledge the person who is signing this assent form understands clearly the nature, demands, benefits, and risks involved in his/her participation and his/her signature is legally valid.

_____
Signature of Investigator Date of IRB Approval: May 29, 2015

Appendix H: Permission from Principal to conduct Study

April 23, 2015
Dr. Joy Hicks
Principal – Quantum High School
1275 Gateway Blvd., Boynton Beach, FL 33426

RE: Permission to Conduct Research Study

Dear Dr. Hicks:

I am writing to request permission to conduct a research study at your institution. I am currently enrolled in the Educational Leadership Doctoral Program at Lynn University and am in the process of writing my dissertation. The study is entitled: *Evaluating Faculty and Student Perceptions of Blended Education to Determine and Measure Student Satisfaction in a Blended Learning Program with At-Risk High School Students*

I hope that the school administration will allow me to recruit students from the school to anonymously complete a 2-page questionnaire (copy enclosed). Also, advisory teachers would also be recruited to complete a 3 page questionnaire along with voluntary participation in individual and focus group interviews (by subject area). Interested students and teachers who volunteer to participate will be given a consent form to be signed by their parent or guardian, an assent form minors, and a faculty consent form (copies enclosed) and returned to the primary researcher prior to the survey administration.

If approval is granted, student participants will complete the survey in the classroom. The survey process should take no longer than 15 minutes. Teacher participants would complete the survey in class and interviews will be held during a time convenient at the teachers' request. The survey results will be pooled for the research project and individual results of this study will remain absolutely confidential and anonymous. Should this study be published, only pooled results will be documented. No costs will be incurred by either your school/center or the individual participants.

Your approval to conduct this study will be greatly appreciated. I would be happy to answer any questions or concerns that you may have at that time. You may contact me at [redacted].

If you agree, kindly sign below and return in person or to my mailbox. Alternatively, kindly submit a signed letter of permission on your institution's letterhead acknowledging your consent and permission for me to conduct this survey/study at your institution.

Sincerely,

Daquia McCoy Lynn University, Boca Raton, FL 33431
[redacted]

Appendix I: Responses to Student Satisfaction Survey
(from A Blended Course Student Survey)

		Questions		Strongly satisfied	Satisfied	Neutral	Dissatisfied	Strongly dissatisfied
INTERACTION	**Q1**	The way I interact with other students in the blended learning classroom.	**n**	59	70	136	16	7
			%	20%	24%	47%	.10%	.02%
	Q2	My participation in the blended learning classroom.	**n**	56	74	136	18	4
			%	19%	26%	47%	.06%	.01%
INSTRUCTION: APEX	**Q3**	The use of blended learning technology in this school encourages me to learn independently.	**n**	89	90	77	23	9
			%	31%	31%	27%	.08%	.03%
	Q4	The level of effort the APEX curriculum requires.	**n**	66	97	99	16	10
			%	23%	34%	34%	.06%	.03%
	Q5	Blended learning helps me better understand course material	**n**	65	78	110	21	14
			%	23%	27%	38%	.07%	.05%
CLASSROOM TEACHER	**Q6**	The teacher makes me feel that I am a true member of the class	**n**	138	81	53	6	10
			%	48%	28%	18%	.02%	.03%
	Q7	The accessibility and availability of the teacher.	**n**	114	94	55	12	13
			%	40%	33%	19%	.04%	.05%
	Q8	Communication of classroom expectations and procedures	**n**	97	85	76	11	19
			%	34%	30%	26%	.04%	.07%
	Q9	Feedback on evaluation of tests and other assignments	**n**	104	70	90	11	13
			%	36%	24%	31%	.04%	.05%
	Q10	I enjoy learning from the teacher	**n**	117	82	66	7	16
			%	41%	28%	23%	.02%	.05%

… Appendix I continued: Responses to Student Satisfaction Survey
(from A Blended Course Student Survey)

		Questions		Strongly satisfied	Satisfied	Neutral	Dissatisfied	Strongly dissatisfied
COURSE MANAGEMENT	**Q11**	I am able to utilize textbooks, dictionaries, and online research to help with my courses	**n**	83	87	81	24	13
			%	29%	30%	28%	.08%	.05%
	Q12	Assigning of necessary courses needed to stay on track and attain my high school diploma	**n**	109	103	57	8	11
			%	39%	36%	20%	.03%	.04%
	Q13	The exclusion of certain course items such as CST's, discussions, and journals allows for a flexible curriculum that ensures my success in the course	**n**	69	80	102	23	14
			%	24%	28%	35%	.08%	.05%
TECHNOLOGY	**Q14**	The videos in the APEX program are clear and comprehensive	**n**	76	97	86	13	16
			%	26%	34%	30%	.05%	.06%
	Q15	The technology used for blended teaching is reliable.	**n**	81	93	74	20	20
			%	28%	32%	26%	.07%	.07%
OVERALL	**Q16**	This school provides the resources necessary for students to succeed in blended courses	**n**	81	92	78	28	9
			%	28%	32%	27%	.10%	.03%
	Q17	My overall learning experience in a blended education program	**n**	69	105	73	25	6
			%	24%	36%	25%	12%	.02%
	Q18	My motivation to succeed	**n**	114	87	69	10	8
			%	40%	30%	24%	.03%	.03%
	Q19	My overall progress with online courses	**n**	80	94	75	26	13
			%	28%	33%	26%	.09%	.05%
		Average	**n**	88	87	84	17	12
			%	31%	30%	29%	1%	.05%