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Online Coursework as Related to Graduation Rates of
At-Risk Students in a Rural Public High School in Bedford County, Tennessee

A dissertation

presented to

the faculty of the Department of Educational Leadership and Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Education in Educational Leadership

by

Robert Ralston

August 2015

Dr. Catherine Glascock, Chair

Dr. William Flora

Dr. Donald Good

Dr. Aimee Govett

Keywords: online education, graduation rates, Tennessee, at-risk

ABSTRACT

Online Coursework as Related to Graduation Rates of At-Risk Students in a Rural Public High School in Bedford County, Tennessee

by

Robert Ralston

The purpose of this study was to determine if there was a significant relationship between the academic achievement, disciplinary referrals, and attendance of at-risk students in rural Bedford County, TN, prior to and after participation in online coursework. The independent variables were the academic achievement towards successful course completions, disciplinary referrals, and attendance rates of at-risk students. The dependent variable was the participation in online coursework in Bedford County Schools (BCS) Online On-track (OLOT) program. A series of t-tests and a chi-square analyses was performed to examine the differences in the mean course completion rates, discipline referrals, attendance rates, and postsecondary plans of graduates.

There was a significant difference in disciplinary referral rates and attendance rates prior to and after participation. Based on these findings there was a positive impact on discipline rates and inversely a negative impact on the attendance rate. Additionally, there was a negative impact on academic achievement rates prior to and after participation in online coursework in the BCS OLOT program. Also, the difference in the proportions of graduates continuing their education and other plans was significantly different from the responses given by all graduates in Tennessee.

DEDICATION

First I would like to give all glory and praise to Jesus Christ, my Savior and Redeemer, through whom I gained strength and continually revisited the parable of the hidden talents.

I would like to recognize the support and push from my wife Carla for supporting me in this venture and helping me find the time to complete the tasks assigned. You have challenged me to remain true to my dreams and aspirations. I hope I can support you in all of your many accomplishments as well.

Next, to my gifts from God, Stone and Gage, you mean the world to me and I look forward to the many blessings that you have in store for you. I hope you remain true to yourself and find the path God has laid out for you before you were even born. You have provided me with a level of love unequalled on earth. I cherish you and pray that all your dreams and ambitions come true.

To the two best friends a person could have, Dr. Gayle Gragg and Dr. Keith Williams. I recognize with your presence and support I was always able to find a sounding board and supporter. I often believed we would never have made it through without holding each other accountable to stay the course we had mapped out for ourselves. You provided me a safe haven to voice my frustrations and ultimately helped me to find a means to overcome any problem. You provided the bump to put me back on the path when I veered too far left or right. It was a venture that I could have only attempted with the two of you along my side. Additionally, I would like to recognize and thank the family of Community High School, where I have the blessing of being the principal. Your constant support and belief in me cannot be expressed in words.

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The experience I have had has provided me a new perspective in learning and has benefitted my professional understanding of the newest approaches in the educational environment. Through this experience provided by East Tennessee State University, I can personally relate to students and educators online learning as we strive to provide alternative approaches to education.

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CHAPTER 1

INTRODUCTION

Online instruction in secondary public schools has grown with estimates that K – 12 students took 2 million courses online annually in 2010 – 2011 (Barth, Hull, & St. Andrie, 2012). These online instructional programs can include single-district, multi-district, charter schools, or virtual online schools. They may operate as multi-state, university-run, blended (hybrid), global, or consortium-based programs. In addition, 250,000 students were enrolled full time in virtual schools in 2010 – 2011 (Barth et al., 2012). As of 2013 – 2014 twenty-five states have implemented statewide virtual programs while 29 states, along with Washington, DC have statewide full-time online schools (iNACOL, 2013). Thirty-six states are moving toward proficiency-based diplomas, advanced competency education policy, credit flexibility, or seat-time waivers (iNACOL, 2013). According to Glass and Sue (2008), academic discussions have shifted from whether or not to establish online programs to discussion of how to maximize the learning experiences of a new wave of online-oriented students in online and traditional educational settings (Glass & Sue, 2008).

Darling-Hammond, Zieleszinski & Goldman (2014) identifies three variables that produce a successful and effective learning experience in online programs: (a) interactive learning, (b) use of technology to explore and create learning, and (c) the correct blend of teachers and technology. Furthermore, Darling-Hammond et al. contend that technology as a tool allows the learner to create new content whereas previously a student received content produced by others. Lang, Waterman, and Baker (2009) point out that when students engage in content-creation projects, students demonstrate stronger engagement, self-efficacy, better attitudes toward school,

and a higher level of skill development. Similarly, Watson and Watson (2011) suggest that technology inclusion can include websites, video production, PowerPoint and Prezi presentations as well as digital storytelling, report creations, graphic representations, and other multi-media means. Interactive learning allows students to be immersed in the presented lesson more deeply than rote “drill and kill” practices by allowing a diagnosis of student levels of understanding, offering interactive instructional activities and providing real-time feedback to students about their progress (Darling-Hammond et al., 2014).

Maninger (2006) found when a group of behavioral problematic students become more responsible for their instruction by using technology; it “gives them an atmosphere of active learning. They are involved in their learning at all times, make their own learning decisions, and buy into classroom learning” (Maninger, 2006, p. 43). Teacher supports and peer input are identified as foundational support for online students (Darling-Hammond et al., 2014).

Similarly, Watson and Watson (2011) noted a study of alternative school at-risk students who found success was dependent on one-to-one student to computer ratio, immediate feedback from the online teacher, and that all students, both online and traditional classroom students, needed interaction with a teacher and support for difficult and challenging topics (Watson & Watson, 2011). Additional success factors in online learning environments include institutional support, course development, teaching-learning process, course structure, student support, faculty support, and evaluation-assessment (The Institute for Higher Education Policy, 2000).

History of Bedford County Schools (BCS) Online On-Track (OLOT) Program

Bedford County Schools (BCS) has incorporated computer-based instruction within traditional instruction since 1985. Instruction delivered via Internet for high school credit began

in the spring semester of 2006 (Norris, personal communication, 2014). In 2002 BCS began a credit recovery program by Plato Courseware for students who had failed the course after attempting to earn the credit through traditional face-to-face classes with a minimum grade of 55. Students worked at school during the school day during available periods of time. Student progress was monitored by designated school personnel; interaction with students regarding academic difficulties was limited, however. Successful completion rates varied among the three high schools based upon the use and emphasis placed on the program (Norris, 2014).

In 2006 Bedford County Schools expanded its computer based offerings by working in conjunction with Hamilton County (TN) School district's federally funded virtual school known as e4TN and offered online coursework for new credit (Norris, 2014). In this program students were able to work on their studies at any time, not limited to school hours or performing the work on school computers. Bedford County Schools' administration drafted policies for BCS teachers to teach online classes in order to trade seats with Hamilton County Schools (Norris, 2014). In 2009 BCS converted the summer school program from a traditional format of instruction to entirely credit recovery and online formats. Allocations of federal funds in Title I, Title II, and Title IV programs were used to pay for networking, programming, and equipment for the e4TN program. In the fall of 2011 e4tN was dissolved and BCS offered one course, Career Management Success, using its own in-system resources for course delivery. In following semesters, courses were added based upon demand and instructor availability.

Funding was made possible through grants specifically targeting at-risk students and potential dropouts. In 2012 a panel of administrators and secondary personnel established a new program titled Online On-Track (OLOT), resulting in a departmentalized education program within BCS.

The mission of the OLOT program was to provide opportunities for students to catch up credits, learn via a different format, graduate early, or structure the school day to allow for early checkout to allow more hours to work a part-time job or accommodate childcare arrangements. Students were directed that their learning experience could take place at alternate locations, during nontypical school times, and could include flexible timelines in the event life circumstances required greater allocations of times versus less time dedicated to learning. Students could use various devices for instruction including tablets, Smart Phones, and other electronic sources (On Line On-Track Handbook, 2013, pp. 3-4).

OLOT specifically addressed the need for staffing assistance and equipment to establish labs within each of the three high schools, as well as the alternative school. Federal funds were allocated for equipment and technology; e-rate funds were used to enhance networking and functionality of the online atmosphere. Each school staffed the lab with an aide who was trained in the standard operations of Moodle and the online classroom. School-level graduation coaches were involved in establishing protocol and given the first level of screening of potential candidates for OLOT involvement. The coaches closely converse with OLOT school monitors to ensure that progress towards completion of online courses is occurring. The OLOT school monitor is responsible for tracking progress and if students have three or more days of no progress within their coursework, a conference is held to establish reasons for inactivity (Norris, 2014).

Since 2012 the component of daily attendance for online instruction has been modified. Cases are reviewed individually and students may have a hybrid schedule permitting them the opportunity to attend certain days of the week, flexible hours, or work independently from home on other days. By offering a flexible schedule many students with prior attendance issues can

show academic progress that otherwise would not occur. Students with health impairments or homebound medical needs can be assigned OLOT courses allowing a schedule to meet personal or family situations (Norris, 2014).

In 2012 during the fall semester 114 BCS students successfully completed 163 courses for credits. The following semester 184 students successfully completed 314 courses for credits. According to data available for the 2013 – 2014 school year, 378 students successfully earned 533 half-credits (Norris, 2014).

Statement of Purpose

The purpose of this quantitative study was to examine the difference between prior participation in BCS OLOT program and after participation in BCS OLOT program using student academic performance, disciplinary referrals, attendance in traditional classes and the reported postsecondary plans for students enrolled in the BCS OLOT program during the school years of 2010 through 2014. Additional research was conducted to examine the difference between BCS OLOT participants' postsecondary plans and the reported plans of all graduating students for the same time period.

Research Questions

The following four questions were investigated to better understand the phenomenon of how taking online courses by high school students in a rural middle Tennessee school impact their overall secondary educational experience and the impact upon the reported postsecondary plans of the same high school students.

- RQ1. Is there a significant difference between student academic success before and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?
- RQ2. Is there a significant difference between the number of student disciplinary referrals before and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?
- RQ3. Is there a significant difference between the attendance of students in traditional classes before and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?
- RQ4. Is there a significant difference between proportions associated with reported plans of continuing their education, entering the labor force, entering the military, and other plans for participants of the Bedford County Schools (BCS) Online On-Track (OLOT) program and all high school graduates in Tennessee?

Significance of the Study

The results of this study can provide additional understanding for administrators and teachers when planning re-engagement strategies for students in a high school setting to eventually earn a regular high school diploma. Furthermore, BCS has received numerous grants to assist at-risk students. Data from this study will aid the system grant writer regarding future grant applications (Norris, 2014).

Definition of Terms

For the purpose of this study, the following terms are defined:

Academic success: The final grade in an academic course with a minimum score of 70 or P resulting in a credit awarded.

Attendance: Enrollment in and participation in the traditional academic school setting for the purpose of gaining education through the awarding of academic credits.

At-risk students: Students identified as displaying one or more characteristics including: (a) pregnancy-parenthood, (b) repeating grades in elementary-middle school, (c) being of age older than cohort members, (d) transfer from other states requiring additional or different credits, (e) nontraditional family living arrangements, (f) family history of nongraduates, (g) experiences with juvenile justice system, (h) health related issues, (i) social adjustment issues, (j) behavioral issues, (k) difficulty focusing in a traditional setting, (l) history of struggling in a particular subject area, (m) multiple failed courses, (n) truancy, and (o) economically disadvantaged (Gragg, 2014).

Blended Course: Any course that combines multiple modes of instruction such as on-line, virtual learning, and face-to-face (iNACOL, 2011).

Blended Learning: A hybrid model that combines traditional brick-and-mortar education with virtual learning (Horn & Staker, 2011).

Credit Recovery: An educational strategy or program that allows students an avenue to earn course credits that students failed to earn in previous attempts in their academic coursework. In Tennessee when a student makes a grade of at least 50 for semester one and at least 50 for semester two, the student may participate in credit recovery to acquire the needed credit (State Board of Education High School Transition Policy, 2013).

Disciplinary Referrals: Infractions that result in an assigned code of In-School Suspension, Out of School Suspension, or Expulsion.

Economically Disadvantaged Students: Students who are determined to be eligible for free or reduced price lunch.

Engagement: Active participation in a course to promote retention and understanding to deeper learning (iNACOL, 2011).

Expulsion: An action taken by the local educational agency removing a child from his or her regular school for disciplinary purposes with the cessation of educational services for the remainder of the school year or longer in accordance with local educational agency policy (Office of Civil Rights Data Collection, 2014).

Graduation Coach: School employees who identify at-risk students and help them succeed in school by keeping them on track academically before they consider dropping out (Georgia Department of Education, 2014).

Graduation Rate Calculation: The number of students receiving a regular, on-time diploma divided by the number of students in the cohort (District Accountability Frequently Asked Questions Summer 2013, 2014).

In-School Suspension: Instances in which a child is temporarily removed from his or her regular classroom(s) for at least half a day but remains under the direct supervision of school personnel. (Office of Civil Rights Data Collection, 2014).

Online Instruction: Education in which instruction and content are delivered primarily over the Internet (Watson & Kalmon, 2014).

Online On-Track (OLOT) program: The name of the online learning program for BCS at-risk secondary school students that offers students the opportunity to learn in a virtual format.

Out-of-School Suspension: Suspension excluding a student from school for disciplinary reasons for one school day or longer during which time the delivery of educational content is denied. This does not include students who served their suspension in the school (Office of Civil Rights Data Collection, 2014).

Traditional Coursework: Instruction delivered in regular classroom by a certified teacher during an established class period.

Truancy: A student who has been absent an aggregate of 3 days without adequate excuse may be deemed habitually truant (Tennessee Compilation of Selected Laws on Children 2014 Edition, 2014).

Virtual Learning: Learning based on instruction and content that is primarily delivered via the Internet (Watson & Kalmon, 2005). This term is used interchangeably with e-learning and online learning.

Virtual Class: A group of students assigned to the same online course” (iNACOL, 2011).

Delimitations and Limitations of the Study

This study was limited to students who participated in the OLOT program at CHS during the school years of 2010 through 2014. Data were gathered from one school setting serving a rural Middle Tennessee community. The results may not be generalized to other rural high schools. Individualized personalized factors unique to students that could impact a student’s educational experience were not taken into consideration.

Delimitations to the study include the structure of the school setting that has remained stable during the students' high school experience with no changes in school-level administration, calendar, facility, course requirements, or OLOT personnel.

Overview of the Study

This study provided an examination of the relationship between participation in BCS OLOT program and student academic performance, disciplinary referrals, previous academic failures, and successful completion of high school requirements during the school years of 2010 through 2014. Using a quantitative analysis offered an opportunity to examine the statistical angle of CHS graduates in their approach to their academics, behaviors, and attendance before and after their participation in online coursework. This quantitative section provided an analysis of student transcripts, disciplinary files, and attendance rates. The BCS online supervisor and supervisor of student data management compiled and generated data for analysis. The data were generated in code with student identifiers removed to protect the anonymity of online participants.

Chapter 1 presents an introduction, statement of the problem, research questions, significance of the study, definition of terms, as well as delimitations and limitations of the study. Chapter 2 contains a review of related literature including theoretical framework on which the study was based, a history of online learning, learning perspectives of online courses, barriers to online learning, achievement in online courses, trends related to high school graduation of at-risk students, common disciplinary infractions, and issues associated with socioeconomic status of youth. Literature discussing benefits and challenges with online coursework, credit recovery, and traditional programs was also reviewed. Chapter 3 was focused

on the methods and procedures used in the study to determine relationships between student online learning experience and academic achievement. Chapter 4 presented the findings evaluated from the study. Chapter 5 contains a summary, the findings of the research questions, conclusions, and recommendations for further research and implications.

CHAPTER 2

REVIEW OF LITERATURE

“Dropping out of high school is no longer an option. It’s not just quitting on yourself, it’s quitting on your country—and this country needs and values the talents of every American.” These are the words of President Barack Obama in an address to joint session of Congress in February 2009 (Remarks of President Barack Obama--Address to Joint Session of Congress, 2009, para. 65). According to The Condition of Education 2014 (2014) an annual report by the National Center for Education Statistics, reveals that “during the years from 2002 to 2012, the percentage of young adults *without* a high school credential who were employed full-time declined from sixty percent to forty-nine percent; for those *with* a high school credential, the percentage declined from sixty-four percent to sixty percent.” Similarly, “individuals aged twenty-five to thirty-four with a bachelor’s degree (\$46,000) earned fifty-seven percent more than high school completers (\$30,000) and more than twice as much as high school dropouts (\$22,900)” (Kena et al., 2014, p.10).

At-Risk Students

Education in the 21st century has never before been as crucial a factor in the impact it has on the individual and society. With the rich technology and globalization that has been founded, a new generation of students, as well as teachers, are required to meet the increase in rigor and rigidity of today’s curriculum and demands in school. New characteristics of learners are necessary for today’s students including creativity, higher order thinking, problem-solving, collaboration, and being technology proficient. Today’s workforce along with tomorrow’s, has

ushered in an increase in accountability and demands that place more responsibility on educators to better prepare students for their new roles in society with a new and higher set of standards. Regardless of all the attention being placed on education and the newest and latest policies and reforms, not all students are meeting these new demands. One such identified group of today's students is identified with the label as being "at-risk."

The determining factors placed on at-risk students are subject to the definition placed on them by researchers, politicians, researchers, or other defining bodies. According to Abbott at-risk students as defined by Great Schools Partnership are "students or groups of students who are considered to have a high probability of failing academically or dropping out of school" (2014). The term can include students who face situations that could jeopardize their chance of completing school such as "homelessness, incarceration, teenage pregnancy, serious health issues, domestic violence, transiency. . . learning disabilities, low test scores, disciplinary problems, grade retentions, or other learning related factors" (Abbott, 2014, para 1). Furthermore, other student characteristics that varying groups commonly include such as physical disabilities, truancy, welfare, socioeconomic status, family structure, educational level of parents, non-native English speaking households, and employment status (Abbott, 2014).

Watson and Gemin (2008) explored the characteristics of dropouts and the circumstances that give rise to their numbers. In their report *Ending the Silent Epidemic: A Blueprint to Address America's High School Dropout Crisis* the following findings of dropouts were documented:

- In comparison to high school graduates, dropouts are at greater risk of being unemployed, be in poor health, live below the poverty threshold, receive welfare, or have children who also dropout of high school.

- Dropouts are more than twice as likely to live below the poverty threshold as high school graduates.
- Dropouts are eight times more likely than high school graduates to be incarcerated.
- Dropouts represent only 3% of actively engaged citizens.
- Dropouts volunteer four times less than college graduates (Watson & Gemin, 2008, p. 5).

At the request of *The Civil Rights Act* of 1964, the Department of Health, Education, and Welfare conducted a research study in 1966 known as *Equity in Educational Opportunity*. The study, more commonly called the Coleman Report, highlighted that a student's economic background has the greatest impact on a student's achievement of the studied variables (Coleman, 1966). In a 2011 report by Chapman, Leird, Ifill, and KewalRamani students living in low-income families had a dropout rate about five times greater than their peers in high-income families and twice the chance over their peers from middle-income families.

According to Jensen (2013) the direct connection between socioeconomic status and academic success highlights the need for educators to investigate the impact of these findings to address the priority being placed on the success of today's next generation learners. As a result many schools are taking deliberate and focused approaches to address risk factors for at-risk students in an attempt to provide them a positive and successful educational experience. Jensen continues by addressing seven differences between middle-class and low-income students that show up at school and what can be done to facilitate intervention programs:

- Health and Nutrition—Students can be provided healthier snacks and meals coupled with opportunities to have recess and physical education. Intermittent stretching and movement can provide outlets for energy and frustration.

- Vocabulary—Low-income students are not exposed to numerous and complex vocabulary. Schools should expose and explain terms and concepts, promoting collaborative groups for conversations.
- Effort—Low-income students are many times labeled lazy and unmotivated. Staff must make connections of what is being accomplished in classroom exercises.
- Hope—Low-income students need affirming and reinforcing comments to guide them in making smarter choices.
- Cognition—Due to previous academic struggles, students who are of low-income households should receive extra time on basic cognitive skills on which to build.
- Relationships—Children from low-income families are in greater need of strong and positive adults. Teacher interactions should demonstrate the expectations being addressed and followed with positive affirmations.
- Distress—Low-income families typically reside in homes with higher stress levels many times associated with other social factors and limited income. Successful interactions allow for coping skills to be taught and used within classroom encounters (Jensen, 2013, pp. 1-7).

Dynarski et al. (2008) indicate that students who fail or miss academic courses are at greater risk of eventually dropping out of school than their peers. Furthermore, the same researchers recommend that schools provide extra academic support to these identified students. Within the high school level of public education, most programs focus on dropout prevention. Recent supports include programming, staffing, and instructional approaches. Credit recovery programs came in the wake of *No Child Left Behind (NCLB)* in 2001. These programs originated with the purpose to graduate more students who were academically behind their

fellow classmates. Credit recovery classes can be offered in a fully online format, as a blended online/in-person style, or strictly as in-person. Credit recovery is a flexible, highly decentralized dropout prevention initiative. Credit recovery classes provide flexible scheduling (McCabe, 2012). Online education companies exploded on the scene such as Plato, Aventa Learning, and Apex Learning, with an estimated \$500 million in income from the educational market (Sawyers, 2010).

School systems such as BCS have begun intervention strategies involving graduation coaches in an effort to combat the occurrence of dropouts. Graduation coaches collaborate with administrators, school counselors, teachers, and parents for the benefit of students to do whatever it takes to allow students to be successful. The team devises a graduation and achievement plan that may include credit recovery opportunities, online classes, or flexible scheduling to enable a student to become a high school graduate (BCS, 2010).

Alternative schools are regularly used to address potential dropouts and at-risk students. In the 2007 – 2008 school year, 64% of school districts nationwide reported having at least one alternative school. This percentage correlated to a reported 646,500 students enrolled in public school districts, using alternative schools for at-risk students (Carver, 2010).

According to Watson, Vashaw, Gemin, and Rapp (2014) one of the newest and fastest growing instructional approaches in education has been the use of online instruction. Online coursework fabricates instruction around the medium of technology to create new pathways of delivery, assessment, remediation, and accessibility. The *2012 Keeping Pace with K-12 Online and Blended Learning* report identifies online learning as the fastest growing trend in education with an estimated 275,000 students enrolled in online schools in 2011 – 2012 and approximately another 620,000 students enrolled in at least one course in 28 virtual schools (Watson et al.,

2014). Furthermore, educators are finding that online coursework, regardless of whether the instruction is completely online or blended, is a more effective way to reach students who have failed courses, have become disengaged, or seek alternative ways to receive an education (Watson & Gemin, 2008).

Attendance

According to Chang (2013) absenteeism has no standard definition and can vary among institutions, state departments, and policy makers. Individuals commonly interchange the terms absenteeism and truancy, although they are not the same. Chronic absenteeism is typically based on the number of days that a student misses from school regardless of excuse or reason whereas chronic truancy refers only to absences that are identified as unexcused (Chang, 2013). BCS identifies a student as truant when the student is absent for 5 days concurrently or a total of 10 days with unverified reasons (Bedford County Board of Education, 2013). A school can have an average daily attendance of 90% and still have as many as 40% of its students identified as chronically absent, based on different students missing different days (Balfanz & Byrnes, 2012).

Furthermore, Balfanz and Byrnes (2012) identify the following points from reported absentee data gathered from six states:

- Chronic absence from kindergarten was associated with lower academic performance in first grade. The impact was twice as great for students from low-income families. Chronic absenteeism reaches its low in third and fourth grades and then increases with each grade that follows
- A strong relationship exists between sixth-grade attendance and the percentage of students graduating on time or within a year of their graduation cohort

- Chronic absenteeism increases achievement gaps at all levels of education—elementary, middle, and secondary
- Students reared in poverty benefit greatly from being in school even without improvements in their educational experiences and will drive up achievement, high school graduation, and college attainment rates (Balfanz & Byrnes, 2012, p. 18).

Attendance of at-risk students has been found to equalize education for students.

Students with high test scores who missed 2 weeks of school per semester were more likely to fail than students with low test scores who missed a week or less of school. Course performance was the greatest predictor of likelihood that students would graduate, while attendance was the strongest predictor for course performance (Allensworth & Easton, 2007).

As reported by Balfanz, Wang, and Byrnes (2012) chronic absenteeism has consistently been found to be the greatest predictor of dropping out of high school in Tennessee, stronger than suspensions, test scores, and being over age for grade, after having controlled for student demographics and background (Balfanz et al., 2012).

The National Dropout Prevention Center/Network identifies four categories for strategies for improving student attendance and truancy prevention; school and community perspectives, early interventions, basic score strategies, and making the most of instruction. Within the area of making the most of instruction, two strategies that were identified as particularly effective were educational technology and individualized instruction (Smink & Reimer, 2005). Railsback (2005) indicates that research strongly suggests students who received personalized learning opportunities and/or are placed within smaller learning environments have better attendance, and lower dropout rates (Railsback, 2005).

Discipline Rates

According to a report released by the Office of Civil Rights, in 2009 of 48,273,920 students in the United States, approximately 5,676,233 students had at least one suspendable disciplinary referral. This calculates to 11.76% of all students receiving in-school suspension, out of school suspension, or expulsion (Office of Civil Rights Data Collection, 2014). Similarly the Tennessee Department of Education (TDOE) releases statistics annually regarding disciplinary infractions via the Tennessee State Report Card. In 2013, out-of-school suspension and expulsion infractions combined for a total percentage of 8.1 for all students in the state. In comparison, the overall rate reported for BCS was 3.6% with Community High School reported at 3.1%, respectively (TDOE, 2014).

Plotkin (2014) states that “disciplined students are more likely to repeat a grade, drop out, and become involved in the juvenile justice system” (p. 13). Schools with high out-of-school suspension rates are challenged to use more effective educational alternatives. Failing to use alternative measures that are well documented as better educational and social outcomes is a serious failure of educational leadership. Though far from ideal, if current high-suspending schools and school districts can bring suspension rates to below the 10% mark for every subgroup, tremendous improvement would translate into higher graduation rates and significant savings for the taxpayer (Losen & Martinez, 2013).

Darling-Hammond et al. (2014) report research indicating that online instruction has proven beneficial for at-risk students by providing a multi-dimensional presentation of topics, stronger engagement in their studies, greater self-efficacy, and an improved attitude toward school. The students who had previously encountered behavioral problems and high rates of

failure on the state test were highly motivated. This was attributed to greater engagement, opportunities to receive customized remediation, and the opportunity to use technology.

Theoretical Framework

Barab et al. (2004) explain activity theory is one social theory of cognition that was developed in the 1920s by Lev Vygotsky. Activity theory is a means for describing what occurs in a participatory unit as it seeks to “transform something” within the context of a system, as opposed to an individual creating some artifact (Barab et al., 2004). Kaptelinin and Nardi (2006) add that since that time, the theory has continued to be developed and widely reviewed during the 1970s and 1980s. They indicate that activity theory development may entail a general research methodology that tracks a program’s history, development, and practice (Kaptelinin & Nardi, 2006).

As applied in this study activity theory includes consideration of the background of the online program in BCS in regard to its history, development, and practice. The program also has the basic mediated activity comprised of (a) tools that include online program artifacts in e-learning environment, (b) a set of subjects (in this case, online students), (c) motivation toward an object (successful secondary online course completion), and (d) a mediation by a community practice (the school and district) that exist within an external environment (Norris, 2014).

Literature identifies multiple learning theories associated with e-learning. Conventional learning theory and e-learning theory can be visualized as a Venn diagram, with each having its own circle of applications yet sharing commonalities. While multiple learning theories influence e-learning, the three foundation notions associated with e-learning are transformation, framing, and emergence (Haythornwaite & Andrews, 2011).

Transformation is located at the center of learning. Transformation can be seen as the goal of pedagogical effort and outcome of successful learning intervention (Mezirow & Taylor, 2009). *Framing*, according to Haythornwaite and Andrews (2011), refers to the way we use certain kinds of rules and experiences as interpretive frames for action. These rules and experiences are established by past participation or understanding of the context of reference. In educational settings a formal classroom provides a context for behavior that consists of paying attention, refraining from talking to others, remaining seated, using appropriate grammar and appropriate language, as well as taking notes. This would be in direct contrast to the behavior at a sporting event. Just as behavior and experiences are framed, likewise is learning (Haythornwaite & Andrews, 2011). Engeström and Sannino (2010) state that the *emergent* nature of learning is the final concept of importance to e-learning. Once a new state of knowledge is attained and consolidated, the learner is again ready to experience and integrate the new learning. Through observation and active engagement with external elements, learners experience new understandings of the object of interest (Engeström & Sannino, 2010).

Washcull (2005) developed an online pre course questionnaire to determine success in an online psychology course. Students in two introductory psychology courses and one human growth and development course were asked to participate in the survey. Washcull concluded that only self-discipline-motivation significantly correlated with various course assessments and that access to technology had less to do with online performance than did self-discipline (Washcull, 2005). Duckworth and Seligman (2005) claim that students with a strong sense of self-discipline significantly outperformed their less-disciplined peers on a range of academic indicators including grades, achievement test scores, and attendance. Additionally, self-discipline

appears to be a better predictor of academic gain than is intelligence (as measured by an IQ test) (Duckworth & Seligman, 2005).

Roblyer and Elbaum (2000) state that past studies of learning in traditional school settings found that cognitive styles and self-efficacy were common predictors of success for postsecondary students. Roblyer, Davis, Mills, Marshall, and Pape (2008) further contend that a number of online studies have analyzed the role of self-efficacy in online success. Roblyer et al. (2008) maintain that the predictive factor of “achievement beliefs” is related to the concept of self-efficacy (Roblyer et al., 2008).

Postsecondary Plans

The Tennessee Department of Labor and Workforce Development Employment Security Division along with the Tennessee Department of Education Division of Vocational Education annually conduct a survey of the reported postsecondary plans of high school graduates. In 2014 the reported responses of graduates was 74.9% having plans of continuing their education at a 4-year university, 2-year college, or at a vocational institute, 14.2% responded with plans to enter the labor force, and 11.0% reported plans of entering the military or having other plans (Tennessee Department of Labor and Workforce Development Employment Security Divisions and the Tennessee Department of Education Division of Vocational Education, 2014b). In comparison, in 2013 the reported responses of graduates was 73.5% having plans of continuing their education at a 4-year university, 2-year college, or at a vocational institute, 15.0% responded with plans to enter the labor force, and 11.5% reported plans of entering the military or having other plans (Tennessee Department of Labor and Workforce Development Employment Security Division and the Tennessee Department of Education Division of

Vocational Education, 2014a). In 2012 the reported responses of graduates was 71.7% having plans of continuing their education at a 4-year university, 2-year college, or at a vocational institute, 15.4% responded with plans to enter the labor force, and 13.0% reported plans of entering the military or having other plans (Tennessee Department of Labor and Workforce Development Employment Security Division and the Tennessee Department of Education Division of Vocational Education, 2013). In 2011 the reported responses of graduates was 72.9% with plans of continuing their education at a four year university, two year college or at a vocational institute, 18.8% responded with plans to enter the labor force and 8.3% reported plans of entering the military or having other plans (Tennessee Department of Labor and Workforce Development Employment Security Division and the Tennessee Department of Education Division of Vocational Education, 2011).

History of Online Instruction

The field of education has traditionally viewed knowledge as something transferred from teacher to student. The manner in which this has been accomplished could be described procedurally. Barab, Evans, and Baek (2004) contend that of recent it has been recognized that “learning is inevitably a collaboration with others in a cultural and social environment” (p.201). This has given rise to the mindset that the earlier cognitive theories of individual cognition and mind have been replaced today with contextualized social theories of cognition whereby participatory learning takes place in a community of practice (Barab et al., 2004).

The emergence of online learning links as far back to the 1840s with the concept of distance learning. Sir Isaac Pitman conducted a correspondence class of shorthand using the exchange of postcards through a new European mail delivery service (Tait, 2003). Distance

learning has no uniform definition and according to the International Association of K-12 Online Learning (iNACOL) as a “general term for any type of educational activity in which the participants are at a distance from each other—in other words, are separated in space. They may or may not be separated in time (asynchronous vs. synchronous)” (iNACOL, 2011, p 5).

Online education varies in definition as education in which instruction and content are delivered primarily over the Internet (Watson & Kalmon, 2014). The term does not include print-based correspondence education, broadcast television or radio, videocassettes, and stand-alone educational software programs that do not have a significant Internet-based instructional component (USDOE, 2010).

Elliott (2014) contends that online education can be more directly linked to the distance learning initiative known as PLATO (Programmed Logic for Automatic Teaching Operations). PLATO was proposed by a group of physicists and engineers at the University of Illinois in the 1960s. The goal was to provide a medium where larger groups of professors and students could more readily interact with one another. Approximately 15,000 hours of instructional content was developed and linked to a common interface. No other single investment in educational technology has been documented to date (Elliot, 2014).

Van Meer (2003) adds that PLATO continued to grow with revisions and additions. New features included online chat rooms, bulletin boards, grading systems, and time-sharing. By 1975 the use of PLATO had expanded to include 146 locations from the University of Illinois to include 10 elementary schools, three high schools, six community colleges, government-related installations, medical sites, and other colleges and universities (Van Meer, 2003). By 1985 the use of PLATO spread to over 100 more campuses and became a commercially available educational product (Elliot, 2014).

Online coursework was used predominantly as a supplementary instruction for struggling students who needed additional help and support or as an enrichment course in addition to normal instruction for students. In 1997 the Virtual High School (VHS) and the Florida Virtual School (FLVS) were formed using a \$200,000 grant and initially serving seventy seven students. The schools were based on instruction being provided by select teachers using technology as the standard means of delivery. When the funds provided by the grant were exhausted, the Florida legislature funded the program using line item funding. This method unintentionally set a limit on the number of participants able to enroll in the two programs and varied year to year. In 2003 the Florida legislature established funding based on enrolled students at \$6.9 million and established performance assessments to assure accountability and enrollment in 2013 – 2014 totaled 410,000 (Mackey & Horn, 2009, Watson, Pape, Murin, Gemin, & Vashaw, 2014).

From this initial pair of schools, multiple hybrids began to surface using online instructions to meet a multitude of student needs. Watson et al. (2012) identify five categories of online and blended learning options:

- Single-district online programs—Created by a district primarily for students within their own district. Most participants gain access to their coursework and instructional support at a physical school. Single-district programs are the fastest growing segment of online learning.
- Multi-district fully online schools—Most students do not attend a physical campus to gain access to instruction or support. Most consist of multiple school districts pooling resources and sharing with one another, pulling students from across an entire state.

- State virtual schools—These schools are legislatively sponsored or supported by a state-level agency. Most are administered by a state education agency and funded by state appropriations or by grants.
- Consortium online programs—These programs are developed by districts, education service agencies, or intermediate service units. These parties combine resources and serve students from multiple districts that subscribe to the consortium.
- Postsecondary programs—Many include private pay options. These tend to include dual credit courses and college-level coursework (Watson, Murin, Vashaw, Gemin, & Rapp, 2012, p.12).

Since the establishment of the two Florida based virtual schools in 1997 the number of state virtual schools has grown to serving 741,516 enrollments in twenty six states for 2013 – 2014. FLVS has maintained the largest number of enrollments accounting for 50% of all course enrollments nationally. Not all state virtual schools, however, have similar growing numbers, with varying reasons like funding, reformation, regulations, and school choices (Watson et al., 2014).

Consideration should be given to the rapid growth of many of the virtual and online schools in that much of the literature provided regarding the success and benefits has been based on the perceptions and results of those directly involved in the delivery of the online instruction (Barbour & Reeves, 2009). Watson and Gemin (2008) identify the ability to offer courses that normally students would otherwise be unable to take as the top reason districts elect to increase and provide online coursework, including but not limited to, Advanced Placement (AP) courses, dual-credit offerings, and specialized courses. Supporters of online courses and virtual schools

identify the opportunity to personalize education offerings to a specific student, contrary to the concept of treating students and unifying coursework (Watson et al., 2014).

Researchers claim that online schools provide high-quality educational opportunities and have demonstrated that online learning can reinforce and strengthen teamwork skills, higher-order thinking strategies, problem-solving skills, and decision-making abilities (Liu & Cavanaugh, 2011). Similarly, research has been conducted on various aspects of online instruction including potential financial savings, emotional impact, social interactivity, and overall effectiveness within segments of students. In contrast, research is limited regarding if online instruction is more or less effective than the traditional format of teaching within regular public education settings. The U.S. Department of Education reported that only a small number of recognized studies are published as to the comparison of traditional and online learning conditions (Means, Toyama, Murphy, Bakia, & Jones, 2010). The National Education Policy Center reported that little to no research exists comparing the outcomes of full-time online schools (Molnar et al., 2014). It is predicted that by 2016 one fourth of all high school courses will be available online and by 2019 over one half of all high school courses will be delivered online (Christensen, Horn, & Johnson, 2008). Considering the amount of anticipated growth in online programs, coupled with the limited research in the effects and outcomes of online instruction, it is critical that quality research be conducted to assess the effectiveness of the trends towards online programming.

Online Learners

In the earliest days of online instruction in FLVS students were primarily seeking AP courses or specific non offered classes at their home schools (Barbour & Reeves, 2009). The

needs of the student are now driving the selections of online courses. In a study by the U.S. Department of Education conducted by the Sloan Foundation, high school principals were surveyed regarding the reasons why their school subscribed to online services. Findings included 61% believed online courses provide AP courses that their school was unable to offer, 73% believed that online courses permitted students to retake courses in which they failed to earn credit (credit recovery), and 79% believed that online courses supplemented their school's standard curriculum by providing course offerings that otherwise would be unavailable (Picciano, Seaman, Shea, & Swan, 2012).

Early research of online focused heavier on adult learners versus younger learners. In contrast, younger learners required less autonomy but a high need of scaffolding of instruction to be successful due to the lack of problem-solving skills and advanced independent learning traits of adults (Cavanaugh & Liu, 2013). Several studies correlate online student characteristics directly to student success. Students who were successful with online courses were more independently motivated toward their academics, high driven by intrinsic sources, possessed strong technology skills, and were highly proficient with time management (Cavanaugh, Effectiveness of K-12 Online Learning, 2007). Online courses that have proved most effective have enrolled student candidates who were carefully screened and recommended by school staff with consideration of online course structure, demands, and expectations (Liu & Cavanaugh, 2011). Accurate research is limited in regard to the dropout rates of online students, due in part to most enrollment practices of online programs allowing students a window of 2 to 4 weeks to drop a course without penalty. The FLVS data revealed that over 50% of students received an "A" in an online course and less than 7% failed to get credit. Additionally, estimates of 25% to 50% of students enrolled in online courses withdrew, giving rise to the thought that all lower-

achieving students had dropped out of the program prior to an overall program analysis (Bigbie & McCarroll, 2000).

Multiple studies regarding online coursework indicate that a combination of technical and psychological factors can increase online success. These include access and knowledge of technology, organization and structure of programs, personal ownership of achievement, and risk taking (Barbour, 2014). Many of these characteristics can be categorized as students who are active learners, who are self-driven with good problem-solving skills and autonomy, and are also interested in independent learning opportunities (Chou & Chen, 2008). The relationship between online success and self-directed learning in the online arena has been positively documented in coursework studies after high school (Chou & Chen, 2008).

Results of multiple studies analyzing the correlation of online quality and validity found that “on average, students in online learning conditions performed modestly better than those receiving face-to-face instruction” (Glass & Welner, 2011, p. 5). From these results, the following points were identified:

- Variations of online programs need to be evaluated independently as 100% online instruction has a notable design difference from hybrid or blended online instruction
- Within varying hybrid and blended online programs notable differences exist in regard to instructional time and face-to-face instructional support
- The mean effect size of blended learning has a positive effect in terms of success for K-12 students (Glass & Welner, 2011, p. 5).

Furthermore, Glass and Welner (2011) concluded that “there exists no evidence from the research that full-time virtual schooling at the K-12 level is an adequate replacement for traditional face-to-face teaching and learning” (p. 5).

History of Online On-Track (OLOT) Program

Instruction by Computer

Bedford County Schools (BCS) has incorporated computer-based instruction within traditional instruction since 1985. Courses have been taught from programming-based instruction to business-related curriculum. Instruction delivered via Internet for high school credit began in the spring semester of 2006 (Norris, 2014).

Credit Recovery

According to Gray (Gray, personal communication, 2014) between the years of 2000 and 2005 discussions were held among directors of schools across Tennessee regarding the implementation of online courses within school systems. BCS Superintendent Mike Bone and Assistant Superintendent Ed Gray began dialogue regarding the use of computer-based programs for remediation for high school students. Norris (2014), grant writer and technology assistant for BCS, began investigating the use of technology in other school districts within Tennessee. As a result of her research, in 2002 BCS began a credit recovery program using software from Plato Courseware. Students were considered candidates provided they had failed the course after attempting to earn the credit through traditional face-to-face classes with a grade of 55. Students worked at school during the school day during study halls or other available free periods of time. Student progress was monitored by designated school personnel; interaction with students

regarding academic difficulties was limited, however. Successful completion rates varied among the three high schools based upon the use and emphasis placed on the program (Norris, 2014).

Online Course Opportunities

Under the tenure of Gray's administration period as BCS Director of Schools, a concerted emphasis was placed on computer-based and online coursework. In 2006 in conjunction with Hamilton County (TN) School district's federally funded virtual school known as e4TN, offerings were expanded to include online coursework for new credit (Norris, 2014).

Norris (2014) further reports that online course opportunities became available to BCS students in 2006 with the participation of six students participating in one course offering—United States Government. In this program students were able to work on their studies at any time, not limited to school hours or performing the work on school computers. Following the success of the first year and those six students, the program was expanded to include all three BCS high schools. To accomplish this BCS purchased "seats" within the classes and paid Hamilton County Schools per student participating. Teachers for e4TN were contracted Hamilton County teachers. Norris drafted policies for BCS teachers to teach online classes in order to trade seats with Hamilton County Schools (Norris, 2014).

Summer School in BCS

Summer semesters typically had smaller participation rates as this was offered as an optional remediation opportunity at one centralized location. Secondly, practices of documentation and procedures were not unified. In 2009, BCS converted the summer school program from a traditional format of instruction to entirely credit recovery and online formats. Allocations of federal funds in Title I, Title II, and Title IV programs were used to pay for networking, programming, and equipment for the e4TN program. Data for fall 2011 through

summer 2012 were limited as e4TN was discontinued and conversations occurred regarding future online offerings. Participant information for fall 2011 through summer 2012 was lost due to computer failure, with only minimal participation in the online program (Norris, 2014).

Evolution of Online On-Track (OLOT)

In the fall of 2011, e4tN was dissolved and BCS offered one course, Career Management Success, using its own in-system resources for course delivery. In the following semester two additional courses were started (U.S. Government and Economics), limited to a few participants. No offerings were extended to students in the summer of 2012.

In 2012 under the administration of BCS Director of Schools a committee (that included various department leaders and me as committee chair) was formed to create a program to expand offerings of courses. Specifically, at-risk students and dropout rates were addressed, using present staff while incurring no new expense. A panel of administrators, graduation coaches, instructional coaches, and technology personnel was organized to maximize use of all available resources to raise the graduation rate. Through in-depth discussion and studying programs of other school districts, the committee created a new program titled Online On-Track (OLOT).

The mission of the program was to provide opportunities for students to catch up credits, learn via a different format, or graduate early. The criteria established by the committee for participating in the program included students; (1) age 16 years or older; (2) demonstrating a strong desire to catch up credits and graduate with age-level peers; (3) commitment to hard work, excellent attendance, and appropriate behavior; (4) meet one of the following criteria—academic failure, family hardship, economic disadvantaged, family history of high school dropouts, health issues, court involvement, Department of Children Services involvement, custody issues or other

social risk factors including, but not limited to, attendance and disciplinary infractions; and (5) exhibiting other situations deemed credible by administration. Candidates and their parents (if under age 18) were asked to agree to the following student expectations: strong commitment to actively pursue what the student was asked to try, minimum of 93% attendance rate, appropriate behavior, be productive in the classroom, show digital citizenship, and be as flexible with scheduling as possible. Students were directed that their learning experience could take place at alternate locations during nontraditional school times and could include flexible timelines in the event life circumstances required greater allocations of times versus less time dedicated to learning. Students could use various devices for instruction including tablets, Smart Phones, and other electronic sources (On Line On-Track Handbook, 2013, pp. 3-4).

Administrative Considerations

Financial arrangements for the OLOT program were strategically aligned to negate additional costs. Previously, BCS contracted with Hamilton County Schools to participate in the e4tN program. Upon the inception of OLOT, Bedford County subscribed to Moodle, a free online e-learning platform (Moodle, 2014). BCS teachers were contracted to teach previously designed courses as well as offered extended contract funds for writing and teaching new courses. Prior to this time extended contract funds had been used for other programs such as tutoring, enrichment, summer school, and remediation. Present instructional coaches were assigned courses to teach in addition to their traditional teaching duties (Norris, 2014). OLOT specifically addressed the need for staffing assistance and equipment to establish labs within each of the three high school and the alternative school. Federal funds were allocated for equipment and technology; e-rate funds were used to enhance networking and functionality of the online atmosphere. Each school staffed the lab with an aide who was trained in the standard

operations of Moodle and the online classroom. A supervisor position with an assistant was established by way of grants and reallocating previous job duties at the director level.

Graduation coaches were involved in establishing protocol and given the first level of screening of potential candidates for OLOT involvement. The coaches closely converse with OLOT school monitors to ensure that progress towards completion of online courses is occurring. The OLOT school monitor is responsible for tracking progress and if students have 3 or more days of no progress within their coursework, a conference is held to establish reasons for inactivity (Norris, 2014).

Since 2012 the component of daily attendance has been modified. Cases are reviewed individually and students may have a hybrid schedule permitting them the opportunity to attend certain days of the week, flexible hours, or work independently from home on other days. By offering a flexible schedule, many students with prior attendance issues can show academic progress that otherwise would not occur. Students with health impairments or homebound medical needs can be assigned OLOT courses allowing a schedule to meet personal or family situations (Norris, 2014).

Students at all three high schools, in addition to the alternative school, may participate in the online program. By making the program available to students at the alternative school, students with severe disciplinary issues or chronic social dysfunction are able to continue to make yearly progress toward graduation comparable to their counterparts who attend school in traditional classes. Due to staffing limitations, however, many courses prior to this time were unavailable to students at alternative school making transition back to traditional programs at their home high school problematic. Upon returning to the traditional setting, students were often placed with students in a lower cohort, not comparative with their grade or age. Now that

coursework can be continued online, students do not lose ground in attaining credits for high school completion (Bennett, 2014).

OLOT had additional benefits regarding expenses, flexibility, time, and control. Previously, courses were extended to students with a per student cost of \$35,000 for a semester for 100 students with e4TN (\$350 per student) as opposed to \$24,000 for 2 semesters for 200 students by conducting the program in-system (\$120 per student). When contracted with e4TN, an editing item with a course required filing the request, resulting in a minimum of 5 days for the correction to occur. With OLOT editing and corrections of coursework assignments are immediate. Previously, courses were designed on a traditional 36-week format, whereas OLOT allows for coursework for a one-credit class to be completed in 18 weeks. This availability is particularly effective when students transfer to us from school systems with block schedules where students routinely complete an entire credit in 1 semester. OLOT also allows for instruction to be closely matched to our school system curriculum versus vendors who may exercise authority to dictate instructions and timeframes (Norris, 2014).

OLOT Completion Rates

In the fall of 2012, 114 BCS students successfully completed 163 courses for credits. The following semester 184 students successfully completed 314 courses for credits. According to data available for the 2013 – 2014 school year, 378 students successfully earned 533 half-credits. Figure 1 shows the number of courses completed, as well as the number of participants involved (Norris, 2014).

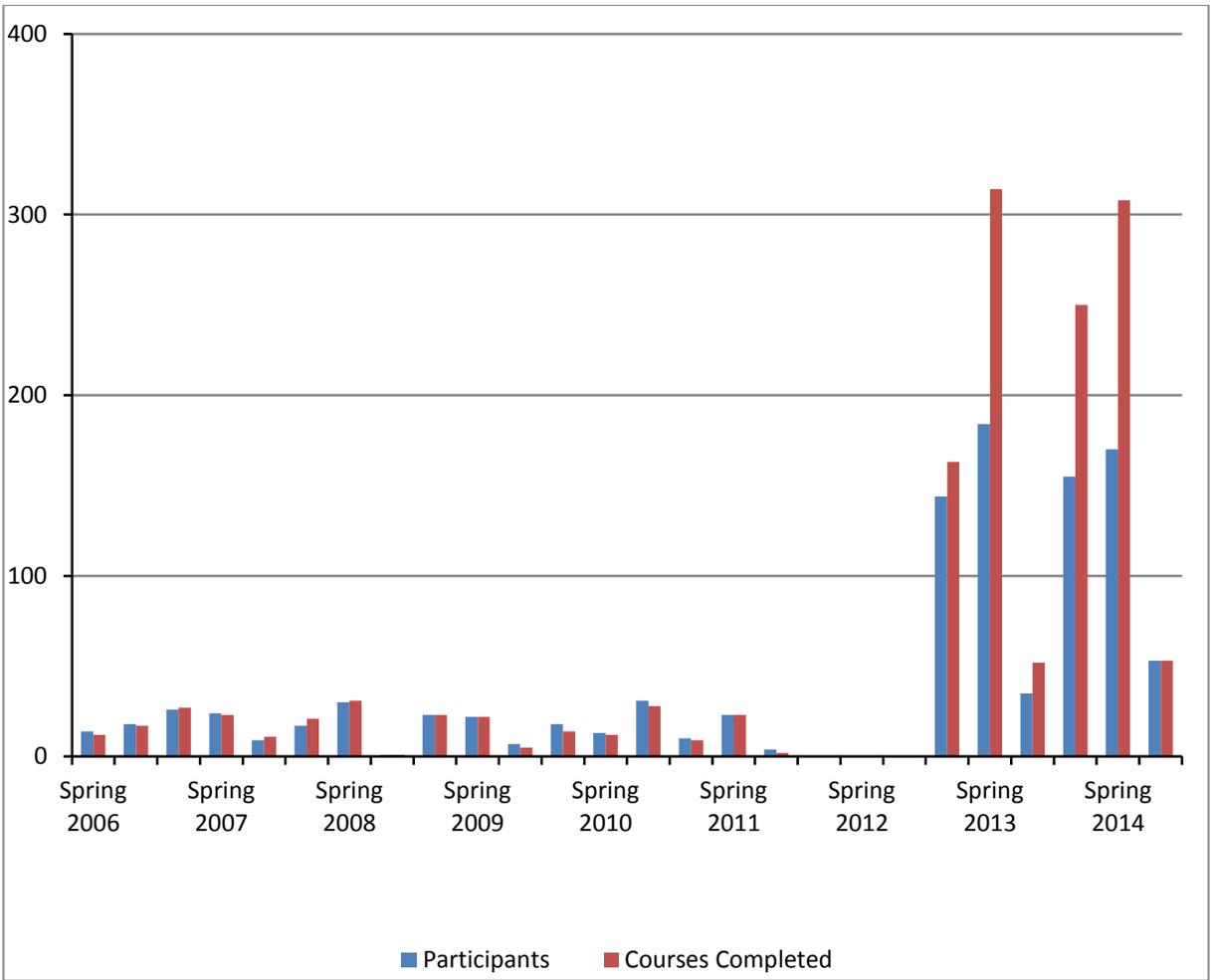


Figure 1. Online courses completed and participants involved 2006 - 2014

Note. For 2012, data were unavailable due to technology failure. Beginning in 2013 BCS administration elected for more financial support for online in lieu of traditional classroom instructors.

Convergence of Student and Online Learning

Across the United States research indicates that low graduation rates are a continual problem in America’s high schools. The problem is significant and unique to small rural high schools in Middle Tennessee with graduation rates of 80 to 90 percent (Tennessee Department of

Education, 2014). Financial constraints continue to frustrate educators by limiting offerings to students identified as at-risk (Hull, 2010). After assessing the situation educators in Bedford County adopted multiple online and computer based approaches to traditional learning opportunities. Plato credit recovery courses are available for students to regain failed credits. A new learning path, Online On-Track (OLOT), has been implemented to allow online instruction for students identified as potential program candidates, and is provided at no cost to students. Some of the various courses available are packaged programs purchased from Moodle, while others are teacher-made courses developed by various local or statewide educators. The OLOT program is designed to help students with situations similar to: (a) students who have fallen behind to gain sufficient credits to graduate with a high school diploma, and (b) allow for a flexible instructional path for at-risk students to complete coursework at various timeframes, including early graduation (Norris, 2014).

Chapter Summary

Students who take online courses are shown to have expressed a greater interest in real-world, highly engaging, and faster-paced instructional presentation. The close analysis of which classes are most successful in both enrollment and successful completion would allow for accurate appropriations of the identified courses. Educators and online schools are challenged to recognize what makes learners at-risk in order to accommodate them. Without this knowledge the promise of online schooling as a means to provide high-quality educational programs for these learners will be misaligned with its intended audience (Archambault et al., 2010).

Means et al. (2010) suggest that a need exists for research to verify that making online courses available and meaningful for public school secondary students can have a positive

impact on the learning outcomes of at-risk students as well as provide insight for policy makers to make specific and evidence-based decisions regarding online learning opportunities (Means et al., 2010).

Dynarski et al. (2008) indicate that students who fail or miss academic courses are at a greater risk of eventually dropping out of school than their peers. Furthermore, researchers recommend that schools provide extra academic support to these identified students (Dynarski et al., 2008). Some examples that schools can provide include extra study time, opportunities for credit recovery, online instruction, and a flexible schedule. Programs may be delivered in remedial classes during the regular school day or as extended learning time, (e.g., before or after school, Saturday school, summer programs, or working from home). In these programs students are able to work with teachers either individually or in small groups to complete coursework or credits required to graduate. In other words, credit recovery and online programs need to address challenges that have prevented students from having successfully completed coursework in a traditional learning atmosphere. This could include flexible pacing and schedules of instruction as well as adapting instructional methods and content to student skill levels and learning styles, extra practice, frequent ongoing assessments to inform instruction, and to provide timely feedback to students. Data reported by schools suggest that credit recovery and online programs may have positive effects on earning credits toward graduation, improvement of attendance, and increased comprehension rates on state standardized tests (Trautman & Lawrence, 2004).

Recognizing that credit recovery and online instruction can be important strategies for dropout prevention, several at-risk programs include such components. Community High School and BCS offer credit recovery programs such as Online On-Track to allow students to graduate

early or to graduate with their original cohort graduation class. This program has shown a positive increase in the number of credits that students can earn in a given year (Gragg, 2014).

Owston, York, and Murtha (2012) state that the use of technology as an alternative to traditional classroom instruction allows for flexibility in scheduling as well as individualized instruction. It also requires strategizing; however, in order to maintain student motivation and engagement to help them develop independent skills, self-discipline, and technology-based communication skills that are necessary to become successful online learners (Owston et al., 2012). Furthermore, O'Malley and McCraw (1999) add that while the field is growing, the online format allows for more potentially inviting courses to be offered to disengaged students; courses that otherwise might not be offered at public schools, due in part to the limited number of requests made for the particular program (O'Malley & McCraw, 1999).

Means et al. (2010) point out one of the most unexpected findings as very limited experimental or quasi-experimental studies have been conducted for comparing the learning effectiveness of online and face-to-face traditional instruction for secondary students (Means et al., 2010). Various studies have occurred using higher education students for study, but very limited numbers including secondary students in public education. Of the studies that have occurred, many have taken very pointed angles, for instance, regarding respondent feelings towards a certain approach to online instruction practices or certain curriculum approaches like literature circles (Whittingham, 2013).

This study provides a better understanding of potential barriers to online learning. Studies show that online instruction does not exist without some degree of barriers to the widespread adoption of online learning (Allen & Seaman, 2006). This research can be used to

identify personalized barriers to secondary students in our locale that may not exist in other areas, allowing for an individualized online arrangement.

CHAPTER 3
RESEARCH METHODS AND PROCEDURES

The purpose of this quantitative study was to examine the relationship between participation in BCS OLOT program and student academic performance, disciplinary referrals, previous academic failures, attendance in traditional classes, and postsecondary plans for students enrolled in the OLOT program during the school years of 2010 through 2014. Chapter 3 introduces the methodology providing the quantitative research framework for the study that includes the research questions and null hypotheses, sample, instrumentation, data collection, and data analysis. The design of the study was a nonexperimental design involving secondary data analysis that allowed for describing what has occurred and explored comparisons among groups by examining trends within the data (McMillan, 2010).

Research Questions and Null Hypotheses

Four research questions and associated null hypotheses were formulated to guide the research for this quantitative study. The first three questions focused on the difference between student academics, discipline, and attendance, based upon enrollment in online coursework. The fourth question focused on differences between OLOT students' projected postsecondary plans and the overall projected plans of all Tennessee students.

1. Is there a significant difference between student academic success before and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?

H₀1: There is no significant difference between student academic success before

and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?

2. Is there a significant difference between the number of student disciplinary referrals before and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?

H₀2: There is no significant difference between the number of student disciplinary referrals before and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?

3. Is there a significant difference between the attendance of students in traditional classes before and after student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?

H₀3: There is no significant difference between the attendance of students in traditional classes before and after the student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program?

4. Is there a significant difference between proportions associated with reported plans of continuing their education, entering the labor force, entering the military and other plans for participants of the Bedford County Schools (BCS) Online On-Track (OLOT) program as compared with all high school graduates in Tennessee?

H₀4: There is no a significant difference between proportions associated with reported plans of continuing their education, entering the labor force, entering the military and other plans for participants of the Bedford County Schools (BCS) Online On-Track (OLOT) program as compared with all high school graduates in Tennessee?

Sample

Community High School, located in Unionville, Tennessee, is a rural public high school serving grades 9 – 12 within Bedford County Schools. In the 2013 – 2014 school year, 484 students were enrolled. The demographics of the school in 2013 – 2014 were 90.7%-White; 5.8%-Hispanic; 2.9% -Black; and less than 1%-other ethnic origins. Approximately 52.8% were economically disadvantaged and 14.9% were reported to have a disability (*TDOE Report Card, 2014*). The cumulative 708 student population from 2011 – 2014 was chosen by examining data obtained from the BCS electronic student data program, PowerSchool. From 2011 – 2014, one hundred fifteen students participated in the OLOT program. The quantitative study was focused on the electronic transcripts and records of 55 students. Records were screened and excluded of participants with partial participation or incomplete discipline or attendance records.

Instrumentation

Student high school transcripts and disciplinary files were used to gather data including the number of credits earned, number of disciplinary referrals, and attendance rates. The method used to measure academic success in this study was the successful completion of academic coursework at an average of 70. Discipline referrals was the total number of referrals of the student resulting in a suspension from class. Attendance rates was the total number of absences from traditional classes based upon the number of days enrolled in the traditional class. The measures were calculated for students before participation in online courses, as well as after their participation in one or more online courses. Bedford County Schools uses the student data management system PowerSchool. Cumulative academic coursework, disciplinary referrals, demographics, and attendance are documented and stored for each student's educational

experience within the school district. Bedford County administrative personnel use and access PowerSchool at school sites, and data are securely stored off-site. Bedford County has a designate supervisor who oversees and manages PowerSchool data. The PowerSchool supervisor extracted disciplinary, attendance, and course completion rates with all identifiers removed. The data were exported into an Excel spreadsheet for the researcher to analyze. At the conclusion of each year a school report for the Tennessee Department of Labor and Workforce Development is compiled identifying the postsecondary plans of graduates. These exit reports was reviewed to determine postsecondary plans of participants in the OLOT program.

Data Collection

The proposed study was submitted to the East Tennessee State University (ETSU) Institutional Review Board (IRB) for review and approval (See Appendix A). Permission to collect the data was then obtained from the Director of BCS (See Appendix B). The data were collected by the BCS Student Management Supervisor via electronic access from PowerSchool archives to obtain the transcripts, disciplinary suspension rates, and attendance rates for CHS online participants from 2011 to 2014. Data were loaded into an Excel spreadsheet. The BCS Student Management Supervisor protected the privacy of students by coding the sample participants and stripping identifying information from the data before providing the information to the researcher. Student records including grades are considered confidential information under state regulations (TCA § 10-7-504(a)(4)(A)). They may not be released without the consent of a parent-guardian of minor students. The Tennessee Code defines student records as:

Information. . . relating to academic performance, financial status of a student or the student's performance, financial status of a student or the student's parent or guardian,

medical or psychological treatment or testing. . . .” Information not considered part of student records includes: “statistical information not identified with a particular student. . . .; and information relating only to an individual student’s name, age, address, dates of attendance, grade levels completed, class placement, and academic degrees awarded. . . . (TCA § 10-7-504(a)(4)(A)).

The data were kept confidential and coupled with the purging of identifiable information, anonymity for the participants was provided. The provided data will reside on a secure password-encrypted laptop located within the researcher’s BCS office.

Data Analysis

The data were sorted into three sections. Each subject was coded with a value of 101 for the first student of section one, with the first digit denoting the section and the second and third denoting the number within the sample group. Each section of students was coded in the same manner (McMillan, 2010). The independent variable is the enrolled participant of OLOT. The dependent variables in the study are course completion rates, disciplinary referral totals, and attendance rates.

Inferential statistics was computed using Statistical Package for the Social Sciences (SPSS), a statistical software program. The data were entered into SPSS and all statistical tests were conducted at $\alpha = .05$ level of significance, meaning a greater than 95% chance that the findings are not by chance. A series of *t-tests* for related samples (paired) was conducted to determine (1) a difference between the course completion rates of students prior to participation in the OLOT program and the course completion rates of students after participation in the OLOT program, (2) if there is a difference between the discipline rates of students prior to

participation in the OLOT program and the discipline rates of students after participation in the OLOT program and (3) a difference between the attendance rates of students prior to participation in the OLOT program and the attendance rates of students after participation in the OLOT program. A one sample Chi-Square analysis was conducted to determine if there is a significant difference between proportions associated with reported plans of continuing their education, entering the labor force, entering the military and other plans for participants of the Bedford County Schools (BCS) Online On-Track (OLOT) program as compared with all high school graduates in Tennessee.

Chapter Summary

Chapter 3 reported the research methodology and procedures for conducting this study. After a brief introduction, a description of the research questions, an overview of the sample, instrumentation, data collection procedures, and data analysis were described.

CHAPTER 4

FINDINGS

The purpose of this quantitative study was to examine the difference between prior participation in BCS OLOT program and post participation in BCS OLOT program using student academic performance, disciplinary referrals, attendance in traditional classes and the reported postsecondary plans for students enrolled in the BCS OLOT program during the school years of 2010 through 2014. A quantitative analysis was conducted to examine the relationship between student participation in Bedford County Schools (BCS) Online On-Track (OLOT) program and academic performance, disciplinary referrals, and attendance rates. The high school selected in this study served a student body of about 500 students from graduating classes of 2011 through 2014 and is located in a rural Middle Tennessee county with a population of approximately 46,000. No data were included for students who did not graduate or participate in the OLOT program.

In this chapter data are presented and analyzed to address four research questions and four corresponding null hypotheses. Data were collected for each participant in online courses in BCS OLOT in 2011 - 2014 that included course completion grades, attendance, and discipline referrals during high school enrollment. Data were retrieved from PowerSchool (BCS student data management system) by the school district data administrator who stripped all identifiable information.

Demographics

Community High School, located in Unionville, Tennessee, is a rural public high school serving grades 9 – 12 within Bedford County Schools. In the 2013 – 2014 school year, 484

students were enrolled. The demographics of the school in 2013 – 2014 were 90.7%—White; 5.8%—Hispanic; 2.9%—Black; and less than 1%—other ethnic origins. Approximately 52.8% were economically disadvantaged and 14.9% were reported to have a disability (*TDOE Report Card, 2014*). The 708 student population from 2011 – 2014 was chosen by examining data obtained from the BCS electronic student data management program, PowerSchool. From 2011–2014, 115 students participated in the OLOT program. The quantitative study was focused on the electronic transcripts and records of 30 students. Records were screened excluding participants with partial participation or incomplete discipline or attendance records.

Research Question 1

Is there significant difference between student academic success before and after student participation in BCS OLOT program?

H₀1: There is no significant difference between student academic success before and after student participation in the BCS OLOT program?

A paired-samples *t*-test was conducted to compare course completion rates of students prior to participation in online courses and their course completion rates after participation in online course format. There was a significant difference in the scores for prior participation course completion rates ($M = 97.1564$, $SD = 5.387$) and post participation course completion rates ($M = 99.2918$, $SD = 3.2497$) conditions; $t(54) = 2.64$, $p = .01$ as reported in Table 1. Specifically, there was a significantly higher course completion rate after participating in online courses than before participation in online courses as shown in Figure 2.

Table 1.

Means and Standard Deviations for Prior Participation Rates and Post Participation Course Completion Rates for BCS OLOT Graduates

Participation	Mean	Standard Deviation
Pre-OLOT	97.16	13.99
Post-OLOT	99.29	3.25

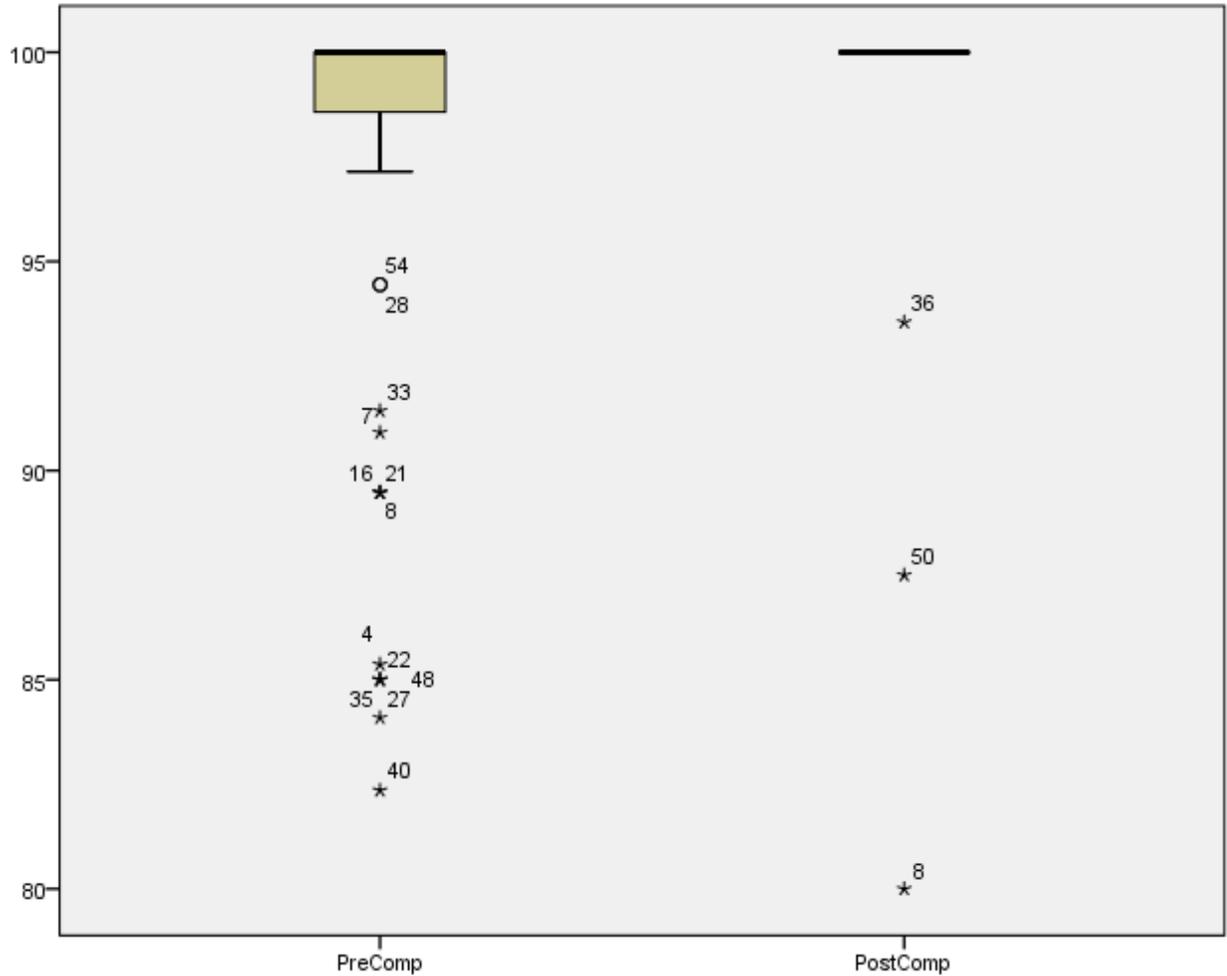


Figure 2. Box plots for student course completion prior to and after participation in BCS OLOT

Research Question 2

Is there significant difference between the number of student disciplinary referrals before and after student participation in BCS OLOT program?

H_0 : There is no significant difference between the number of student disciplinary referrals before and after student participation in BCS OLOT program?

A paired-samples *t*-test was conducted to compare the number of disciplinary referrals that a student received prior to participation in online course(s) and disciplinary referrals after participation in an online course format. There was a significant difference in the rates for prior to participation disciplinary referrals ($M = 3.8182$, $SD = 6.65302$) and post participation referrals ($M = .6727$, $SD = 1.15557$) conditions; $t(54) = 3.707$, $p < .001$ as reported in Table 2. Specifically, there were significantly fewer disciplinary referrals after participating in online courses than before participating in online courses as shown in Figure 3.

Table 2

Means and Standard Deviations for Prior Participation Rates and After Participation Disciplinary Referrals for BCS OLOT Graduates

Participation	Mean	Standard Deviation
Pre-OLOT	3.82	6.65
Post-OLOT	.67	1.16

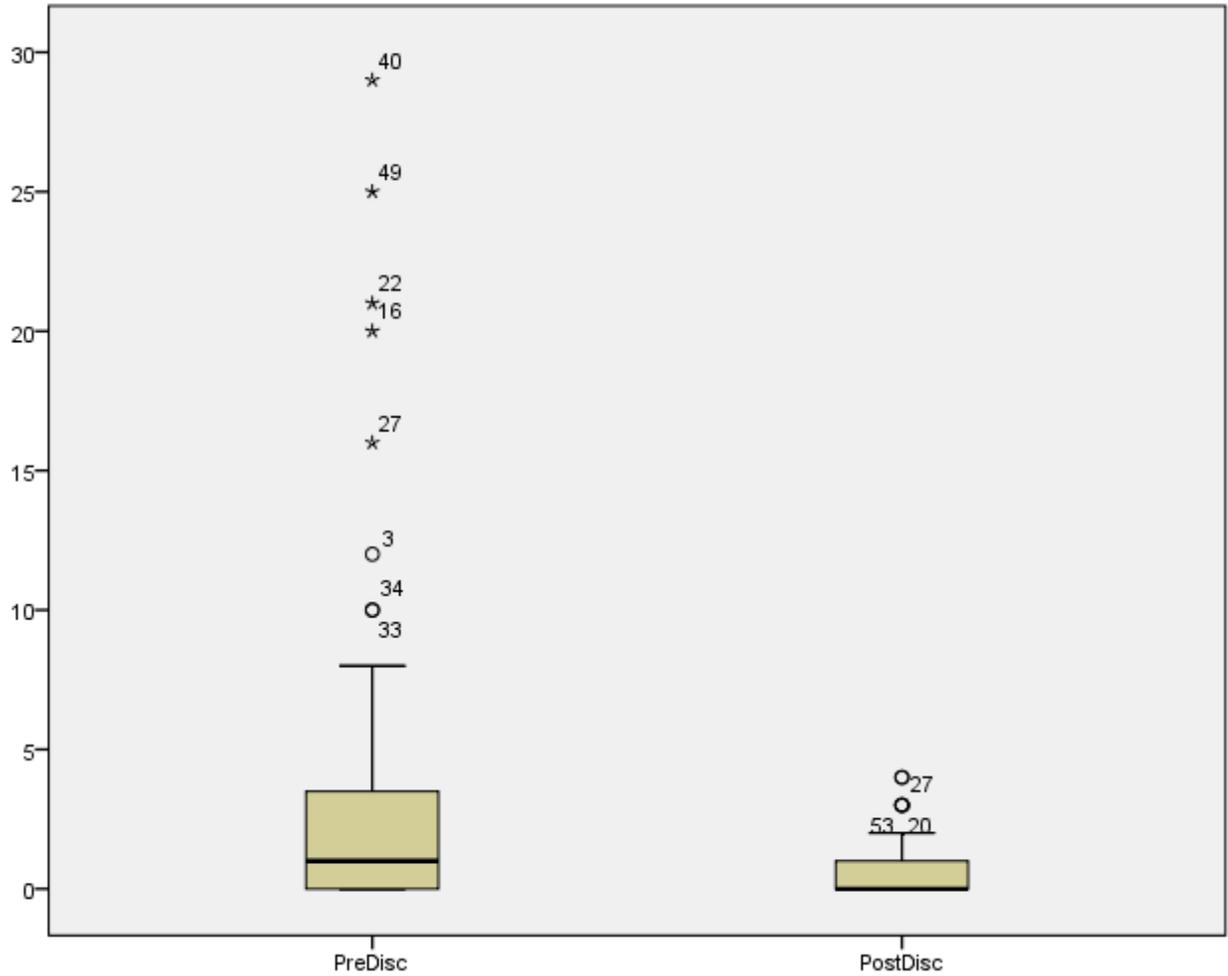


Figure 3. Box plots for student disciplinary referrals prior to and after participation in BCS OLOT

Research Question 3

Is there significant difference between the attendance of students before and after student participation in the BCS OLOT program?

H₀3: There is no significant difference between the attendance of students before and after student participation in BCS OLOT program?

A paired-samples *t*-test was conducted to compare attendance rates of students prior to participation in online courses and attendance rates after participation in an online course format. There was a significant difference in the scores for prior to participation attendance rates ($M = .9481$, $SD = .04548$) and post participation attendance rates ($M = .9250$, $SD = .06929$) conditions; $t(54) = 3.721$, $p < .001$ as reported in Table 3. These results suggest that participation in an online class does have a significant effect on attendance rates of students. Specifically, there are significantly more absences after participating in online classes than before participating in online classes as shown in Figure 4.

Table 3

Means and Standard Deviations for Prior Participation Rates and After Participation

Attendance Rates for BCS OLOT Graduates

Participation	Mean	Standard Deviation
Pre-OLOT	.052	.045
Post-OLOT	.075	.069

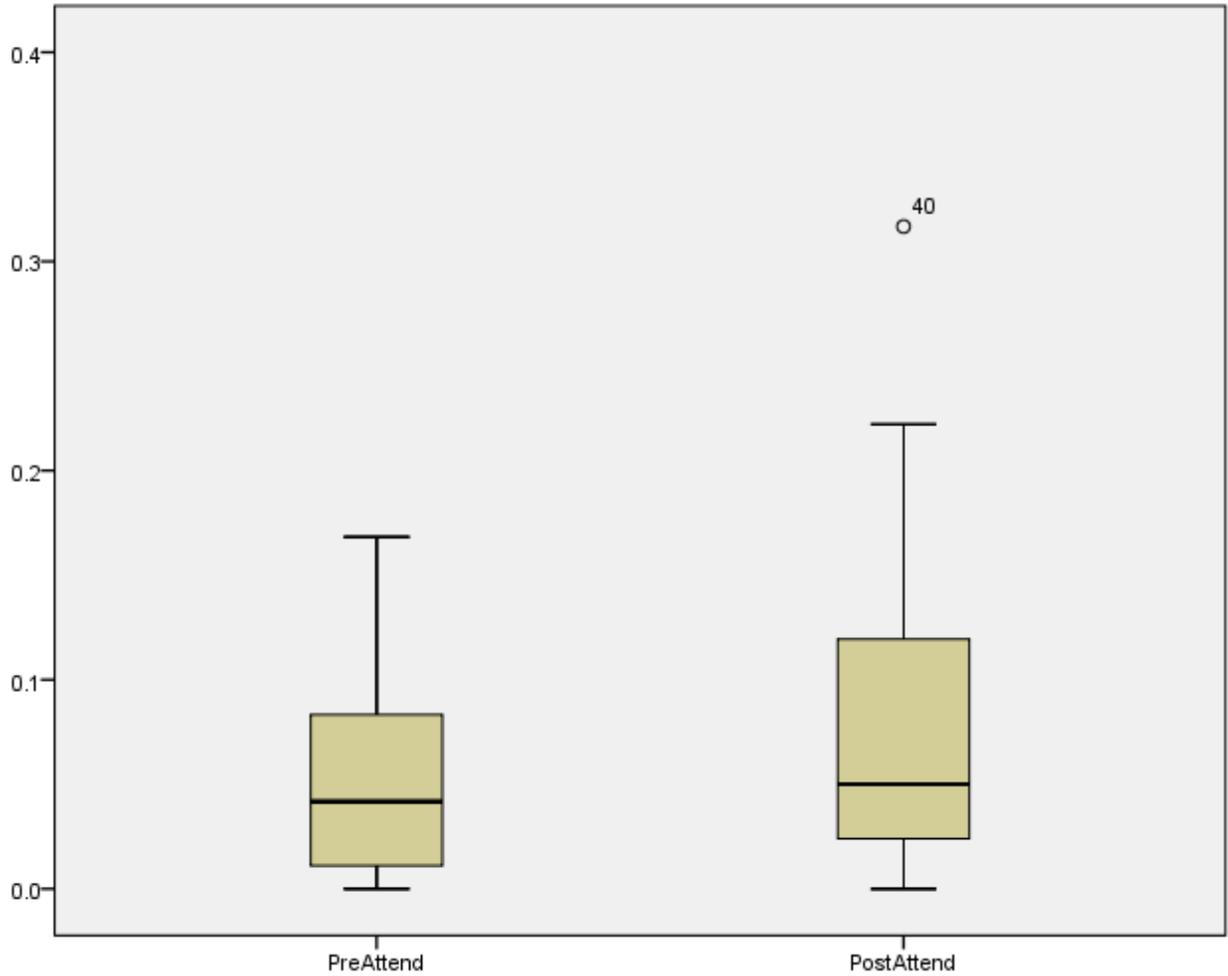


Figure 4. Box plots for student attendance prior to and after participation in BCS OLOT

Research Question 4

Is there a significant difference between proportions associated with reported plans of continuing education, entering the labor force, entering the military, and other plans for participants of BCS OLOT program as compared with all high school graduates in Tennessee?

Ho4: There is not a significant difference between proportions associated with reported plans of continuing education, entering the labor force, entering the military, and other plans for participants of BCS OLOT program as compared with all high school graduates in Tennessee?

A two-way chi-square test was conducted to determine if differences existed between the reported plans of continuing their education, entering the labor force, entering the military, and other plans for participants of the Bedford County Schools (BCS) Online On-Track (OLOT) program as compared with all high school graduates in Tennessee. There exists a significant relationship between reported plans of continuing education, entering the labor force, entering the military, and other plans for participants of Bedford County Schools (BCS) Online On-Track (OLOT) program as compared with the reported plans of all high school graduates in Tennessee, $\chi^2 (2, N = 222,730) = 25.059, p < .001, \text{Cramers } V = .011$. BCS OLOT graduates were significantly less likely to continue their education than those reported by all Tennessee graduates (49% to 73%) and BCS OLOT graduates were significantly more likely to report other plans than those reported by all Tennessee graduates (31% to 11%) as shown in Figure 5.

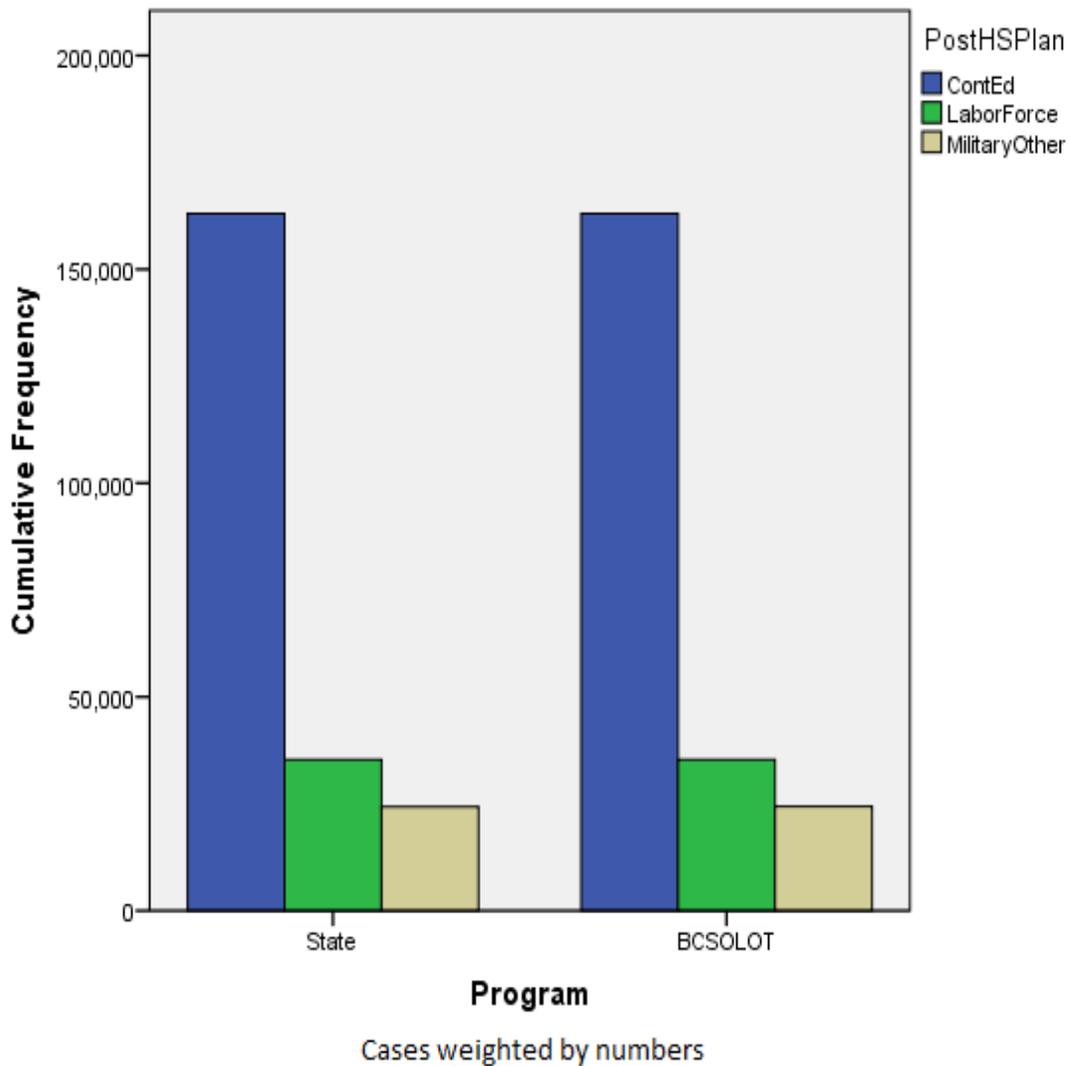


Figure 5. Bar graph representation of the 2011-2014 postsecondary plans for all Tennessee graduates and BCS OLOT participating graduates

Chapter Summary

The purpose of this study was to examine the experiences of at-risk students in a growing new approach to instructional practices. This study was focused on a quantitative analysis of online participants of a rural Middle Tennessee high school in the areas of academic course

completion, disciplinary referrals, attendance, and postsecondary plans. Results suggest that participation in an online class does have a significant positive effect on course completion rates of at-risk students. Additionally, there are significantly fewer disciplinary referrals after participating in online courses than before participation. Significantly more absences were documented after participation in online classes than before participation. Additional findings include BCS OLOT graduates were significantly less likely to continue their education after high school and were significantly more likely to report other plans than those reported by all Tennessee graduates.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

In the last decade online coursework has become an integral part of the educational landscape within public high schools. High school administrations strive to find options and programs to provide success for student populations. Online instruction has moved to the forefront as one of the newest and fastest educational opportunities in response to this demand (Watson, Vashaw, Gemin, & Rapp, 2014). This instructional method provides a differentiated opportunity to advance and engage students who exhibit problems with academics, behavior, and attendance within the traditional educational setting. Researchers have identified, regardless if instruction was solely computer-based or a blended method of delivery, that online coursework can be a more effective way to reach at-risk secondary students (Watson & Gemin, 2008).

A close analysis of multiple studies found students in online learning settings performed modestly better than their peers in traditional educational settings (Glass & Welner, 2011). In measuring the success of online students, researchers identify careful and specific screening of candidates as being directly linked to the likelihood of successful completion of online coursework (Liu & Cavanaugh, 2011). One of the key reasons for support of online instruction has been the ability to personalize the educational path of an individual with specific coursework, contrary to traditional format found in today's brick and mortar classrooms (Watson, Vashaw, Gemin, & Rapp, 2014). This chapter contains a summary, conclusions, and recommendations for readers interested in the relationship between online coursework of at-risk students in a rural Middle Tennessee school and their previous academic achievement, disciplinary referral rates, attendance rates, and postsecondary plans.

Summary of Results

The researcher conducted the study to determine if there is a significant difference between the academic achievement of students in relation to course completion, student discipline referrals, and student attendance rates based upon participation in online courses in Bedford County Schools (BCS) Online On-Track (OLOT) program, and postsecondary plans of program graduates. Course completion rates, discipline referrals, attendance rates, and postsecondary plans of students were collected from BCS OLOT participants graduating between 2011 and 2014. Data were collected by the district student data supervisor via electronic data accessed from transcript and student data archives in order to observe potential trends. The data analyses were based upon four hypotheses that were tested at a .05 level of significance. The independent variables in the study were completion rates, discipline referrals, and attendance rates. The dependent variable was participation by the student in BCS OLOT program. The sample for this research was 55 graduates from BCS who participated in the OLOT program. The statistical analyses guided by the research questions in Chapter 1 were expanded upon in Chapter 3.

Research Question 1

Is there a significant difference between student academic success before and after student participation in Bedford County Schools Online On-Track program?

A *t*-test for paired samples was conducted to compare the mean credit completion rates of students prior to their participation to the completion rates of the same students after enrollment in online courses in the BCS OLOT program. There was a significant difference in the scores for prior participation and post participation course completion rates. Specifically, there were

significantly higher course completion rates after participating in online courses than before participating in online courses.

Research Question 2

Is there a significant difference between the number of student disciplinary referrals before and after student participation in Bedford County Schools Online On-Track program?

A *t*-test for paired samples was conducted to compare the mean discipline referrals of students prior to their participation to the discipline referrals of the same students after enrollment in online courses in the BCS OLOT program. There was a significant difference in the scores for prior participation and post participation disciplinary referrals. Specifically, there were significantly fewer disciplinary referrals after participating in online courses than before participation in online courses.

Research Question 3

Is there a significant difference between the attendance rates of students in traditional classes before and after student participation in the Bedford County Schools Online On-Track Program?

A *t*-test for paired samples was conducted to compare the mean attendance rates of students prior to their participation to the attendance rates of the same students after enrollment in online courses in the BCS OLOT program. There was a significant difference in the scores for pre-participation and post-participation attendance rates. These results suggest that participation in an online class does have a significant effect on attendance rates of students. Specifically,

there are significantly more absences after participating in online classes than before participation.

Research Question 4

Is there a significant difference between proportions associated with reported plans of continuing their education, entering the labor force, entering the military, and other plans for participants of the Bedford County Schools Online On-Track program as compared with all high school graduates in Tennessee?

A two-way chi-square test was performed to determine if significant differences existed between the reported plans of continuing education, entering the labor force, entering the military, and other plans for participants of the BCS OLOT program as compared with all high school graduates in Tennessee. Based on the analysis, there exists a significant difference between reported plans of continuing education, entering the labor force, entering the military, and other plans for participants of the BCS OLOT program as compared with reported plans of all high school graduates in Tennessee.

Conclusion

Online coursework is one of the newest instructional practices being used in public education today. Research is presently being conducted to determine the impact of online coursework accomplishment for at-risk students and the educational system. This study was focused on impact of online coursework for at-risk students in one rural middle Tennessee secondary school. The results of this study align with other research in the area academic success. Watson and Gemin (2008) concluded that regardless of the delivery implementation of

online coursework is a more effective way to reach at-risk students for whom traditional approaches have failed. This study aligns with research by Darling-Hammond (2014) that online instruction has a positive effect for at-risk students in the area of greater engagement and motivation that resulted in fewer behavior and discipline problems.

This study found that attendance rates for at-risk students in this research decreased after participation in on-line classes. This dynamic contradicts the findings of research regarding on attendance and course performance (Allensworth & Easton, 2007). Additional investigation of research on attendance finds that attendance is crucial when enrolled in traditional classes. Additional research in the area of attendance as it relates to online learning could prove beneficial to educational leaders and policy-makers. While online instruction is one of the fastest growing instructional formats today, research would prove beneficial to school districts and leaders seeking alternative instructional methods to the established approaches within secondary education.

Recommendations for Practice

High school online coursework allows students a new approach to their education. The findings of this study provide administrators, supervisors, policy makers, school counselors, parents, and students with information to consider a different delivery of educational coursework. The following recommendations can yield significant benefits to school leaders as they make educational decisions.

1. Administrators, counselors, parents, and students can examine specific academic needs of students regarding online coursework as an option for potential candidates. Research by Dynarski et al. (2008) indicates that schools should consider providing

- extra academic support to students at greatest risk of eventually dropping out of school.
2. Administrators and counselors may consider limiting the number of online courses as an intervention options for students with attendance issues. According to findings from RQ #3 of this study, participation in an online class had a significant effect on attendance of students after participation in online class. The study results indicated that absences increased among this particular sample. Keeping these results in mind, administration and system level personnel may choose to examine attendance policies and requirements for OLOT participants.
 3. Administrators, counselors, and parents could potentially consider OLOT courses for students with ongoing persistent disciplinary referrals. Maninger (2006) suggests that behavioral problematic students often become more responsible for their own learning decisions when instruction uses technology.
 4. Administrators, counselors, and system level personnel may choose to expand online course offerings to heighten student engagement. Watson and Gemin (2008) imply that online coursework, even if blended with traditional instructional methods, is a more effective way to reach students who have failed courses or have otherwise become disengaged in school.

Recommendations for Future Research

The purpose of this study was to determine if students who participated in the BCS OLOT program were more successful high school in terms of academic success, discipline experiences, and attendance due to their participation. The findings of this study indicate that

students who participated in OLOT had fewer discipline issues and performed academically better after participation OLOT courses.

The following recommendations are identified for future research for those interested in the relationship between online courses and high school educational experiences.

1. Conduct qualitative research among various stakeholders (comprised of students, administrators, support staff, and parents) to better identify how the phenomenon of taking online courses impacts successful completion for at-risk students. As presented in Chapter 2, Watson and Gemin (2008), Coleman (1996), Chapman et al.(2011), and Jensen (2013) have explored the relationship between socioeconomic status and scholastic achievement.
2. Also indicated in Chapter 2, Abbott (2014) offers in-depth discussion regarding challenges faced by at-risk students. Qualitative research could be conducted within a sample of at-risk students to identify specific characteristics (e.g., learning styles, lifestyles, initiative to work independently, etc...) that promote successful completion of online course credits for at-risk students.
3. Jensen (2013) presents a variety of initiative and goal-oriented struggles associated with at-risk students. A qualitative study could be conducted to better understand personal goals of secondary students who are seeking to meet high school diploma requirements by taking an online course.
4. Findings from RQ #3 noted that online participation had a significant impact on student attendance. Current attendance policies and procedures could be examined to better understand the relevance of how the emerging popularity of online participation relates to existing attendance policies.

5. This study encompassed a heterogeneous combination of participants regarding race, gender and ethnicity. Further analyses could be conducted using a larger sample of students participating in online coursework to determine the impact online learning has on specific subgroups within the school environment.

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APPENDICES

Appendix A: Letter of Approval from ETSU Institutional Review Board



East Tennessee State University
Office for the Protection of Human Research Subjects • Box 70565 • Johnson City, Tennessee 37614-1707
Phone: (423) 439-6053 Fax: (423) 439-6060

April 3, 2015

Robert Ralston
ralstonr@goldmail.etsu.edu

Dear Robert,

Thank you for recently submitting information regarding your proposed project "A Study of Online Coursework to Improve Graduation Rates of At-Risk Students in a Rural Public High School in Bedford County, Tennessee."

I have reviewed the information, which includes a completed Form 129.

The determination is that this proposed activity as described meets neither the FDA nor the DHHS definition of research involving human subjects. Therefore, it does not fall under the purview of the ETSU IRB.

IRB review and approval by East Tennessee State University is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are human subject research in which the organization is engaged, please submit a new request to the IRB for a determination.

Thank you for your commitment to excellence.

Sincerely,
Stacey Williams, Ph.D.
Chair, ETSU IRB



Accredited Since December 2005

Appendix B: Request for Approval to Collect Data

Letter of Approval for Data

April 4, 2015

Mr. Don Embry, Director
Bedford County Schools
500 Madison Street
Shelbyville, TN 37180

Dear Mr. Embry,

As a doctoral candidate at East Tennessee State University in the Educational Leadership and Policy Analysis program, I am currently working to complete my dissertation. I would like to examine the relationship between student's participation in the On-Line On-Track program and progress towards graduation. To complete this research, I will need data obtained from PowerSchool archives from the graduating classes of Community High School between the years of 2011-2014.

Please consider this an official request to receive data from the Bedford County Schools PowerSchool System Administrator containing the discipline, attendance and course completion for each participant in the OLOT program from Community High School. Please separate the data into three groups:

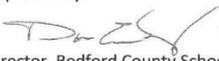
- Group 1: participants attendance prior to and following participation in OLOT
- Group 2: participants attendance prior to and following participation in OLOT
- Group 3: participants attendance prior to and following participation in OLOT
- Group 4: participants post-secondary plans

I appreciate your willingness to assist with my research and data collection, as it pertains to my dissertation topic. Upon completion, I will be glad to share the results of my study with the staff and administration of Bedford County Schools. If you have questions or need additional information, you may reach me ralstonr@bedfordk12tn.net.

Sincerely,


Robert Ralston
Educational Policy and Leadership Analysis

Approved by:


Director, Bedford County Schools

