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The Effects of Cyber Courses on Southside Virginia Community College Student's Grade Point Averages

Kelley A. Barnes
Old Dominion University

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**A Research Project Presented to
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**By
Kelley A. Barnes
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SIGNATURE PAGE

This research paper was prepared by Kelley A. Barnes under the direction of Dr.

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the Degree of Masters of Science in Occupational and Technical Studies.

APPROVED BY:

_____
Dr. John M. Ritz

Research Advisor and Graduate Program Director
Occupational and Technical Education
Old Dominion University

Date:

_____

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CHAPTER I

INTRODUCTION

There are an increasing number of web-based or cyber courses being offered at

Southside Virginia Community College. The increase is occurring due to the fact that the

Virginia Community College System is attempting to promote ways of increasing

enrollment numbers in Virginia.

According to a Milam, Voorhees, & Bedard-Voorhees (2004), "Community

colleges were among the earliest adopters of distance learning technology and their

enrollments in this area continued to grow (p. 73). The Chancellor of the Virginia

Community College System, Glen DuBois, and the State Board of Community Colleges

created seven goals they deemed to be important and needed to be accomplished by 2009

(Virginia Community College System, 2005). One goal is related to increasing the

enrollments in Virginia Community Colleges.

The Virginia Community College system lists one way to achieve enrollment

increases is by implementing distance learning courses and the implementation of a

satisfactory technical infrastructure to support them (Virginia Community College

System, 2005). From the Virginia Community College's point of view, cyber courses are

making education more accessible while improving the enrollment of full-time and part-

time students within the college system, but it needs to be asked if these cyber courses are

providing a positive impact on the students' academic success?

Many students are now enrolling at Southside Virginia Community College

because they feel that cyber courses are offering them a means of completing certificates

and degrees more conveniently. For some students cyber courses may be a positive

concept. However, the students enrolling in these courses do not recognize the demand and independence which are required to successfully complete courses delivered via the web. Their lack of knowledge in relation to the requirements of cyber courses can lead them to dropping out of their coursework, as well as students demonstrating low achievement levels in the courses which they enroll. In turn, this can have a direct impact on their academic success by decreasing their overall grade point averages while completing their degree at Southside Virginia Community College. The researcher believes it is important to determine if student's participation in cyber courses has a direct impact on the academic success at Southside Virginia Community College. This will be done by looking at the grade point averages between participants and non-participants of cyber courses within the community college.

Statement of the Problem

The purpose of this study was to determine the effects on grade point averages while participating in cyber courses during completion of degrees at Southside Virginia Community College.

Research Goals

To guide this problem, the following research hypothesis was established:

H_0: There will be no significant difference in students' grade point averages at Southside Virginia Community College when they are enrolled in classroom or cyber courses.

Background and Significance

Over the past ten years, Southside Virginia Community College has increased the delivery of web-based courses. It began offering many courses online ranging from

academic courses such as English and mathematics to occupational courses such as computer programming. The major reason behind this increase was so the college could reach out to more educational consumers in their service area as well as other areas, which in turn would increase their college enrollment numbers as a result of the goals established by the Virginia Community College System established in Dateline 2009. The goal related to this study was stated, "The VCCS must serve at least 16,000 new students by 2009" (Virginia Community College System, n.d., p. 1).

Even though this method assisted the college in increasing its enrollment numbers, there was also a negative side which exists to the cyber transition. The increase of the cyber course offerings has led to a decrease in some of the courses being offered on campus in a traditional setting where other students might need the courses. This led to some students participating in cyber courses so they could fulfill their degree requirements and graduate. This may not have been their choice of delivery. This in turn could possibly lead those students to lowering their academic success levels if they were not familiar with the skills and abilities needed to participate in courses online. According to the University of West Georgia, because all students do not have the technical skills to complete courses online, it could pose a curse in a sense by students not doing well (McAlister, Rivera, & Hallam, 2001). Therefore, it is important to determine whether the cyber course transition is becoming a hindrance for student's performance at Southside Virginia Community College.

Rationale must be provided for delivering courses via the traditional method along with the cyber method. Many things need to be considered when choosing which instructional method needs to be utilized when offering various courses. Students may

enroll in online courses, but it may result in a problematic situation for them in relation to academic achievement. As pointed out by University of West Georgia, students not prepared to participate in cyber courses will end up lagging behind or dropping the course when it is too late (McAlister, Rivera, & Hallam, 2001). All students do not learn well in the same way, and many may not do well in an online environment because they need the structure of a traditional setting to be successful. According to Bork, "Benjamin Bloom demonstrated many years ago with extensive experiments in Chicago Public School that EVERY student can learn well, given the appropriate learning environment" (2000, p. 2). Therefore, Southside Virginia Community College, as well as other community colleges, need to value the importance of providing learning environments whether they are in class or online that will assist their students in being successful academically.

The focus of this research study is to determine whether participation in cyber courses has a direct impact on student's academic success levels at Southside Virginia Community College. By comparing the GPA's of students completing programs using both learning methods, it will assist the researcher in determining if there is any existence of adverse effects of cyber courses on student's grades.

Limitations

The limitations of this study were as follows:

1. The results of this study were confined to students attending Southside Virginia Community College campuses located in Alberta, Virginia, and Keysville, Virginia.

2. This study included students who have received associate degrees, but does not include students who have completed certificate or diploma programs.

3. The information collected for this study was limited to students graduating since Summer of 2003 to Spring of 2006.

4. The students compared in the study consist of those who have had five or more cyber courses verses those who have only enrolled in seated courses.

Assumptions

In this study, there were several factors which were believed to be true. They were as follows:

1. Learning independence affected students' performance in cyber courses.

2. Students had a choice of taking their required courses as cyber courses online or as traditional courses in a classroom over the time period while completing their Associates Degrees.

3. In this study, approximately half of the students chosen were participating in cyber courses and half were participating in traditional courses.

Procedures

Students at Southside Virginia Community College in Alberta, Virginia, and Keysville, Virginia, were utilized to conduct this research study. These students have completed their Associates Degrees at Southside Virginia Community College over the last three years. While some students completed their degrees participating mainly in traditional courses, others chose to partake in various courses delivered online.

First, students who do not participate in cyber courses while completing their degrees were identified by obtaining student records from the Student Information System which is located in the Peoplesoft database. Next, students who did participate in cyber courses during the completion of their degrees were identified by obtaining student records from the Student Information System located in the Peoplesoft database. Once these students were recognized, their overall GPA's were retrieved from the student information system. The GPA scores were then compared between the students which were chosen for this study. The comparison was used to determine if there was any significant difference in student's academic success based on the GPA's of those who completed degrees taking cyber or traditional courses.

Definition of Terms

The following is a list containing the terms and their meaning which are relevant to this research study:

1. **Cyber Course -** a course which is delivered via the web. All content, communication with the instructor, information exchange, and submission of assignments are completed via the Internet.

2. **Traditional Course -** a course in which the students attend class at a specific time and place. The instructor is in the classroom with a group of students and most instruction, exchange of information, and assignment submissions are done within the classroom.

3. **GPA -** stands for Grade Point Average, which is an overall numerical average based on grades received in each course a student has completed.

4. **Dateline 2009 -** it is a strategic plan encompassing goals which were established by the Virginia Community College System that are to be met by 2009, to meet the needs and reach out to educational consumers in the VCCS service area.

5. **Peoplesoft -** is a database software utilized by the Virginia Community College institutions to manage student information such as the degree programs in which they are enrolled, courses which are completed and need to be taken, course grades, and overall grade point averages.

6. **Academic Success -** is the student's ability to complete degree requirements satisfactorily by demonstrating the ability to meet course requirements.

Overview of Chapter

This chapter identified the various components which are involved in this research study. It focused on the importance of determining whether courses should be offered in the traditional method which is in class or the cyber method which is online. By making this determination, it will provide students with the most appropriate learning environments to fit their needs and assist them in fulfilling their degree requirements more successfully. The purpose of this study was to determine the effects on grade point averages while participating in cyber courses while completing degrees at Southside Virginia Community College.

Chapter II, Review of Literature, covers information on the cyber and traditional environments, the impacts of cyber courses, as well as aspects of cyber courses and academic success founded by other researchers. Chapter III, Methods and Procedures,

explains how the study was conducted and describes the techniques used to complete the study. Chapter IV, Findings, provides and analyzes the results of the study. Lastly, Chapter V, Summary, Conclusions, and Recommendations, concludes the study and describes what may be done with the findings.

CHAPTER II

REVIEW OF LITERATURE

Cyber courses have become a common educational delivery strategy utilized in higher education institutions. These forms of education have assisted institutions in many positive aspects, but there are negative aspects to the cyber world also. According to Milam, Voorhees, and Bedard-Voorhees, "The wave of online education certainly spells convenience for students as well as an opportunity for community colleges to rejuvenate themselves by exploring a new instructional paradigm" (2004, p. 73). Even though colleges are offering courses at a distance, there are many factors which determine if this form of education is the correct choice for some students, as well as factors which determine how successful a student may be in an online environment. This review covers the comparison of traditional and cyber environments, impacts of cyber courses, and factors related to cyber courses and academic success.

Traditional Verses Cyber Environments

In today's educational society many higher education institutions are transitioning their course offerings to being obtainable online along with the traditional in-class options. According to Dominguez & Ridley (2001), most students participate in a mixture of online and traditional courses. A cyber course can be defined as a course being offered via the Internet with the use of software which is web-based (Danville Area Community College, 2004). There are many aspects which differ between a traditional and cyber environment. Faculty roles, student roles, and reasons for participation in cyber courses are all important comparisons which provide key differences between the traditional verses the cyber modes of education.

First, faculty members administering cyber courses have varying roles and obligations from those who are administering instruction in a traditional in-class environment. According to Milam et al. (2004), "Traditional roles melt away in an online environment" (p. 79). Therefore, the instructors in a cyber environment are not the lecturers or the center of the learning environment as they are in the traditional settings, as well as they are not verbally presenting the information to their students. Instructors take on a rather unique role in an online environment.

According to Palloff and Pratt (2001), the instructor becomes a facilitator or guide who assists students in working in collaboration with their peers. Students entering a cyber environment may not be accustomed to this form of instruction, because they are familiar with the traditional form of instruction in which they may be more secure. Palloff and Pratt (2001) also point out that traditional students are used to the instructors being what is termed the "sage on the stage". This means that students are accustomed to having the instructor at the front of the classroom instructing them on what exactly they must know to be successful in the course. Therefore, they are not always prepared for the new roles which their instructors will be providing for them in the online environment. Some students may then realize the traditional settings are more valuable to them academically.

Instructors must also be certain when providing the online instruction that they are extremely descriptive and straightforward in relation to what they require of students in their online course. According to Milam, Voorhees, and Bedard-Voorhees (2004), it is extremely important for cyber instructors to include their expectations of the students in their course syllabi. This will assist students which are coming into the cyber

environment for the first time in knowing early in the course what is expected of them as an online participant, as well as they may determine if this form of education will fit their academic needs. The instructor's roles become quite different in a cyber setting and it is extremely important for them, as well as the students to transition with the new role so that each will be successful in functioning within the online environment.

Secondly, the role of the learners participating in a cyber environment also changes from that of what is expected in a traditional environment. In the traditional setting, learners are accustomed to being the receivers of knowledge, while the instructor is the provider. According to Milam et al. (2004), learners in an environment of distance education act as a teacher which is unlike students who are participating in a traditional classroom. Learners in a cyber classroom become more responsible and accountable in the process of receiving the knowledge needed to become successful participants in the course. According to Hiltz and Shea (2005), online learners play a more active role in their activities. Therefore, in cyber environments while instructors serve as the course facilitators, learners must be highly motivated to learn and be active participants in learning the course information so they will in turn be successful in the learning process.

Lastly, there are various reasons which exist as to why students prefer the traditional or cyber environments while completing their academic requirements. Many students visualize the online courses as a way of convenience in completing their degrees. According to Hiltz and Shea (2005), some of the various reasons as to why students choose the cyber environment are as follows: conflicts exist with other academic courses or employment, a more flexible pace for study and work submission, and the ability for not having to commute to campus to participate in a course. This allows the non-

traditional students who work, have families, or other impeding obligations. It is a way of receiving their education at a better convenience which fits their life styles.

On the other hand, there are students who prefer to participate in traditional class meetings as a means of completing their degree requirements. According to Hiltz and Shea (2005), some of the reasons as to why students prefer traditional environments are as follows: provides the ability to have face-to-face contact with the teacher, provides the ability to have contact and interaction with peers, provides more motivation due to the regular schedule of a class time, provides them with more proficient learning, and advisors encourage them to take the course in the classroom. Therefore, there are also students who benefit from the traditional environment and prefer this form of instruction as opposed to the cyber environment. The students make these choices based on what they are accustomed to and what they deem are the best fit for them completing their academic careers successfully.

Impacts of Cyber Courses

Being that cyber courses have become a conventional mode of course delivery in higher educational institutions, they have led to various impacts on the learners, as well as the instructors who conduct these courses. Cyber courses have impacted the way in which students must learn, as well as the characteristics and skills which they must possess in order to be successful in this form of education. These courses have also had an impact on the ways in which instructors must conduct their courses which guide the students to doing well in the online environment.

One important aspect of online courses is they are not a good fit for all students. A significant impact of cyber courses is that students who participate must be able to

adapt to the new way of learning because it is extremely different from the traditional classroom requirements. It is a substantial change because students do not have an instructor standing in front of them readily providing the course structure and information.

As indicated by Milam et al. (2004), a big issue in the online environment is that instructors and their students do not meet and communicate in the same space. This in turn requires students to take over in the learning process and be more accountable which may not be possible for all. According to Milam, Voorhees, and Bedard-Voorhees, "Many students do not understand the demands of taking an online course and how their learning styles might, or might not, be supported by online instruction" (2004, p. 81). Therefore, it is important that online participants recognize and understand what is expected of them as students to be successful in this type of learning environment.

Another important impact of cyber courses is students who participate in them must possess special characteristics and skills in order to be successful. McAlister, Rivera, and Hallam (2001) point out that it is extremely important for online students to possess high levels of motivation and self-discipline in these courses. Without these two characteristics, students will not be able to complete online coursework successfully. Brewer, DeJonge, and Stout (2001) indicate that online learners must also be self-directed. If learners cannot provide their own direction and structure in the learning process, they will more than likely not be as successful in this type of learning environment. Palloff and Pratt (2001) also specify that students must be self responsible. If students cannot take responsibility for themselves in an online environment, they may fall behind in the course work and become unsuccessful. Students must also possess the

skills of reading and communicating effectively in an online course. Hiltz and Shea (2005) indicate that reading and writing are major means of communication in online courses; therefore in order to be successful students must convey themselves effectively in this manner. If the learner is unable to successfully communicate through their writing skills, it can lead to problematic situations while participating in cyber courses. Students must also have the technical skills required to participate in courses delivered online. If they do not possess technical skills which encompass sending and retrieving course information via the Internet, this can lead to a serious downfall in their success in an online course. It is extremely important that potential cyber participants possess the necessary characteristics and skills needed before they take part in a cyber course so they can complete the course productively.

There are also many impacts which the cyber courses have upon the faculty members who are providing the instruction for the online students. One important impact is that instructors must learn to transition from the traditional approaches of instruction to the new methods of online instruction. It is essential that the instructors communicate clearly and effectively to the students in relation to what is required of them in the cyber course academically and technically. As indicated by McAlister et al. (2001), the objectives and goals of online courses must be clearly expressed and defined for the students. Instructors conducting online courses also need to focus on other aspects of the course rather than the content as they do in a traditional course. Palloff and Pratt point out that, "The key to success in an online class rests not with the content that is being presented but with the methods by which the course is delivered" (2001, p. 153).

Online instructors must pay close attention to their delivery methods and how they facilitate the online student in learning the content within the cyber environment. It is also significant that the online instructors address the changes which need to be made in relation to the ways in which they assess online learners. Since the instructor and learner are not face-to-face during assessment, there needs to be a modification in the ways in which online students are assessed for successfully learning course content. As indicated by Milam et al. (2004), the instructor must make certain that students who signed up for the cyber course are the ones who are submitting the work. As a result, measures need to be taken to ensure the participant who is signed up for the online course is the same person completing the work which is required. This can be accomplished by meeting with the students enrolled in the course at various points during the semester for evaluations of the content which they have learned.

Another impact which cyber courses have had on instructors is that they must be extremely active members of their courses while facilitating student learning. Instructors must be active participants in an online environment for various reasons. As indicated by Palloff and Pratt, "instructors need to stay actively involved, diagnose problems as they occur, and seek solutions to keep the course moving and students motivated (2001, p. 118). These responsibilities may seem similar to those of a traditional classroom, but in a cyber environment the instructor has to be more involved and active while paying closer attention to students, because they cannot physically see what is taking place, and the situations must be approached differently in the online setting. Palloff and Pratt (2001) also point out that problems within cyber environments do not appear as quickly and may go unrecognized for a longer period of time. For that reason, instructors must play active

roles and monitor their online students closely. It is also essential that online instructors monitor students work submission in a cyber environment. Instructors need to examine why students do not send their work and attempt to motivate them to come back into the class (Palloff & Pratt, 2001).

From time to time conflict can also play a negative role in an online environment. Instructors must be active so they can observe any differences which may arise among online students. Conflicts can lead to students decreasing the amount of participation they contribute in a cyber environment. Palloff and Pratt (2001) point out that if students are causing problems in an online course, other students may fear the negativity and withdraw from participating. Instructors must identify these problems and resolve them so all online contributors can be successful in the class. It is essential that online instructors perform as active participants within their cyber courses, so they may facilitate their learners in successful completion of their coursework.

Cyber Courses and Academic Success

There are various factors which play key roles in how successful academically learners are in a cyber course. The students' learning styles are a major factor which can predict their success in a cyber course, as well as their overall qualities which they possess as a learner. The qualities and performance of the instructor administering the cyber course can also influence the students overall academic performance. Instructors must be prepared to assist cyber students in being successful in this type of learning environment.

Students who possess certain learning styles tend to flourish more in an online environment than others. According to Hiltz and Shea (2005), students prefer to obtain

academic information based on their learning style which affects how a student interacts

and learns from various media forms. Therefore, students who possess certain styles of

learning may not learn well using a computer and the Internet to complete a course

online. According to Meyer, "There is evidence that students with certain learning styles

(e.g., visual) or behavioral types (e.g., independent) do better in a web environment"

(2003, p. 16). Being that certain learning styles and behavioral types have an affect on a

student's success, it is important that students recognize what they prefer as a learner

before enrolling in a certain course format. As a result, a student's learning style plays a

key role in how well they perform academically in a cyber environment, as well as how

successful they will be.

Secondly, learners must possess specific traits to be strong academically in a

cyber course. Diaz (2002) indicates that in order to be successful learners, students must

possess the quality of a strong independent learner. Being independent in an online

environment is important because the learner chooses when to complete and submit their

coursework. If an online student does not possess this independence, it will lead to

nonsuccess in an online course. According to Hiltz and Shea (2005), an online student

will do well if they possess motivation, can direct themselves, and are comfortable with

their technical skills. Online students must be able to guide themselves through the

course and in order do so, it requires enthusiasm and ease with technology. If the learner

lacks the technological knowledge needed, it can become problematic because they will

not be able to receive and submit work required for successful completion of the course.

Students must also be fully involved in the online course. Palloff and Pratt state,

"Successful learners in the online environment need to be active, creative, and engaged in

the learning process" (2001, p. 107). Learners who are not involved in the process tend to lose out on significant information which will assist them in being academically successful. A learner's locus of control can also be a factor which predicts their academic success. According to Hiltz and Shea (2005), learners who have an internal locus of control will be more successful in a cyber course than those who possess an external locus of control. Therefore, those students who believe they are in control of their own performance will do better academically than those who do not. A student's traits play a key role in how well they will perform academically in a cyber environment and without these traits the online courses may not be effective.

There are also other predictors that exist prior to enrolling in online courses related to a student's past academic experiences which may predict their success in an online environment. Hiltz and Shea (2005) point out that a student's level of education, their GPA, and other experiences with distance education are all predictors of successful completion in a cyber course. Diaz indicates in his study, "successful online students exhibited a higher GPA prior to enrollment in the online course (avg. GPA =3.02) than unsuccessful students (avg. GPA=2.25)" (2002, p. 2). This information indicates those students with higher GPA's are more likely to perform well in a cyber environment. Palloff and Pratt (2001) specify that students who are older than the average college student tend to do better because they are more serious about their education. Therefore, the non-traditional college students are usually successful participants who flourish in an online setting. A learner's experience, educational level, GPA, and other factors play a significant role in their ability to succeed academically in the vastly growing cyber environments.

Lastly, an essential factor related to student success in an online course is the overall qualities and performance of the instructor conducting the course. Students must be satisfied with their cyber experience in order to complete their courses successfully. Students' satisfaction is a significant element for them to be effective participants in an online course (Milam et al., 2004). If the students are not pleased with the course and the instructor, they tend to be less successful and drop back in their levels of participation. Students in this form of education also need to be able to interact with their instructors because they are not in a traditional setting. "Encouragement, praise, and assurance that they are on the right learning path are also critical feedback components that help students get through rough times and keep on working" (Milam et al., 2004, p. 80). By providing students with feedback and communication in an online course, it will promote them in doing well and assist them in being successful academically. Instructors must also be available for students' questions while working in a cyber environment. Hiltz and Shea (2005) indicate that students who cannot access the instructors believe they do not acquire as much knowledge and tend to be less satisfied with the online course. Therefore, it is essential that instructors provide their online learners with times in which they will be available for questions and concerns. This will provide the students with more guidance, a feeling of interaction, and satisfaction. The instructor's actions in a cyber environment play a significant role in the promotion a student's level of academic success.

Summary

The Review of Literature presented an overview of the comparisons between traditional and cyber environments, impacts which cyber courses have upon learners and instructors, as well as factors which contribute to academic success in environments. Higher education institutions are promoting the creation of cyber courses for their programs. It is extremely important to recognize the difference between the traditional and cyber modes of instruction, the effects which cyber courses have, and the skills and characteristics which students and instructors require to promote academic success in online settings.

The following section will be Chapter III, Methods and Procedures. This chapter will discuss the methods and procedures utilized by the researcher to conduct the research study.

CHAPTER III

METHODS AND PROCEDURES

This chapter covers the methods and procedures utilized in this research study. The research study was experimental in nature. The following sections were included in Chapter III: population, research variables, methods of data collection, statistical analysis, and summary.

Population

The sample chosen for this research study consisted of one hundred students who have graduated from Southside Virginia Community College in Alberta, Virginia, and Keysville, Virginia. The students in the research population have received Associates in Arts and Applied Science General Studies degree from Southside Virginia Community College, which was the largest program of the college as a whole. These students graduated from Southside Virginia Community College during the time frame ranging from the Summer of 2003 to the Spring of 2006. Group I consisted of fifty students who participated in five or more cyber courses over the time of which they completed their degree. Group II consisted of fifty students who did not participate in cyber courses, but chose to complete their degree courses in a traditional in-class setting.

Research Variables

The research variables which were included in the study are traditional students, cyber students, and each student's grade point average. The grade point average serves as the dependent variable in the study, whereas the traditional and cyber students serve as the independent variables. Group I consisted of participants of cyber formatted courses while completing their Associates in Arts and Applied Science General Studies degree at

Southside Virginia Community College. Group II, were non-participants of cyber

courses, but participants of traditional courses while completing their Associates in Arts

and Applied Science General Studies degree at Southside Virginia Community College.

Methods of Data Collection

The data for this research study were collected through Southside Virginia

Community College's student information system database which is used for all

campuses. Peoplesoft 8.2 was the database software which was used to research the data.

The Peoplesoft database was queried to find a sample of students who had participated in

cyber courses and a sample who had only participated in traditional seated courses who

had graduated from Southside Virginia Community College receiving Associates in Arts

and Applied Science General Studies over the last three years. After finding fifty cyber

and fifty non-cyber students, their grade point averages were recorded in an Excel

Spreadsheet to manage the data for analyzing.

Statistical Analysis

The research study was conducted by obtaining grade point averages for students

at Southside Virginia Community College which have completed the General Studies

program. Each student from Groups I and II were given an identification number so their

names would not be disclosed and be kept confidential. Grade point averages were

collected for Group I who participated in five or more cyber courses, as well as Group II

who did not participate in cyber courses but earned their credits in a traditional setting.

The means for Group I and Group II were calculated by summing their GPA scores and

dividing the totals by the number of students in each distribution. The means were

utilized to compare and see if there was any relationship which existed. The statistical

analysis was completed by utilizing the mean measure of central tendencies and the t-test procedures.

Summary

Chapter III of this study summarized the methods and procedures employed to carry out this study. The topics covered were population, research variables, methods of data collection, statistical analysis, and summary. Chapter IV presented the findings where the data was analyzed and the t-test was performed.

CHAPTER IV

FINDINGS

The purpose of this study was to determine the effects on grade point averages while participating in cyber courses during the completion of degrees at Southside Virginia Community College. This chapter contains the findings of this the research study. The student data were used to determine if there was a significant difference in the academic success of students enrolled in cyber courses verses students enrolled in traditional courses by analyzing at their grade point averages.

t- Test Calculations

In conducting this research study, the GPA scores for cyber and traditional students were entered into a spreadsheet and the means were calculated. Once the means were calculated, they were entered in the t-Test formula to establish if there was a significant difference between GPAs of students who completed their degrees participating in five or more cyber courses verses those only participating in traditional courses delivered in a classroom setting. The mean score for the students at Southside Virginia Community College participating in cyber courses while completing their degrees was 3.13. The mean score for students at Southside Virginia Community College participating in traditional courses while completing their degrees was 3.38. The t-Test was calculated based upon the cyber and traditional students' means resulted in a -2.55. The results of the t-Test indicated that the values did exceed the .05 level of significance which was determined to be 1.99 at a degree of freedom of 98.

The results comparing cyber student's GPA scores and traditional student's GPA scores at Southside Virginia Community College after completing their Associates in

Arts and Applied Science General Studies degree are located in Tables I and II including

the calculation of the mean. Each student incorporated into the research study was given

a student number to keep their personal information confidential. The t-Test calculations

for the research study are located in Table III.

TABLE I

CYBER STUDENT GPA'S	
STUDENT NUMBER	**GPA**
01C	**3.67**
02C	**3.32**
03C	**3.43**
04C	**3.52**
05C	**3.11**
06C	**2.32**
07C	**2.56**
08C	**2.51**
09C	**3.02**
10C	**2.55**
11C	**3.88**
12C	**3.27**
13C	**2.78**
14C	**3.29**
15C	**3.18**
16C	**2.59**
17C	**3.29**
18C	**3.13**
19C	**2.99**
20C	**3.85**
21C	**4.00**
22C	**2.91**
23C	**2.57**
24C	**3.71**
25C	**3.66**
26C	**3.34**
27C	**3.21**
28C	**3.38**
29C	**2.48**
30C	**3.65**
31C	**3.52**
32C	**2.64**

CYBER STUDENT GPA'S (Continued)	
STUDENT NUMBER	GPA
33C	2.55
34C	3.24
35C	3.43
36C	2.83
37C	2.75
38C	3.03
39C	2.71
40C	3.50
41C	2.21
42C	3.20
43C	3.08
44C	3.38
45C	3.22
46C	2.65
47C	3.41
48C	3.01
49C	3.33
50C	3.55

N=50   Σx= 156.38

$$\overline{x} = \frac{\Sigma x}{N} \quad \begin{matrix}\text{(sum of instances)}\\\text{(number of instances)}\end{matrix}$$

Cyber Mean Calculation

$$\overline{x} = \frac{156.38}{50}$$

(Mean Score) $\overline{x} = 3.13$

TABLE II

TRADITIONAL STUDENT GPA'S	
STUDENT NUMBER	GPA
01T	3.71
02T	3.70
03T	2.97
04T	3.94
05T	1.90
06T	2.50
07T	3.19
08T	2.65
09T	3.80
10T	3.48
11T	3.73
12T	3.05
13T	3.59
14T	3.33
15T	3.81
16T	3.70
17T	3.81
18T	4.00
19T	3.65
20T	3.12
21T	2.33
22T	3.82
23T	3.36
24T	4.00
25T	3.80
26T	3.81
27T	4.00
28T	2.85
29T	2.54
30T	2.65
31T	4.00
32T	2.56
33T	3.43
34T	4.00
35T	3.86
36T	4.00
37T	2.97
38T	4.00
39T	3.55

Traditional STUDENT GPA'S (Continued)	
STUDENT NUMBER	GPA
40T	3.94
41T	3.38
42T	3.50
43T	3.88
44T	2.69
45T	2.81
46T	3.65
47T	3.37
48T	2.78
49T	2.77
50T	3.32

N=50   Σx = 169.22

$$\overline{X} = \frac{\Sigma x \quad \text{(sum of instances)}}{N \quad \text{(number of instances)}}$$

Cyber Mean Calculation

$$\overline{X} = \frac{169.22}{50}$$

(Mean Score) $\overline{X} = 3.38$

TABLE III
t-Test Calculations for Research Data

t-Test Calculations Based on Data Collected at SVCC

$$ t = \frac{3.\ 13\ -\ 3.38}{\sqrt{\left(\frac{9.27 + 14.49}{50 + 50\ \text{-}\ 2}\right)\left(\frac{50\ +\ 50}{50\ (50)}\right)}} $$

t-Test Results Based on Data

$$ t = \sqrt{\frac{-0.25}{0.0096}} \qquad t = \frac{-0.25}{0.098} $$

$$ t = \ \text{-}2.55 $$

Summary

Chapter IV exhibits the results and calculations of the t-Test on the data collected

for the research study. The data were analyzed by calculating the mean scores for

Southside Virginia Community College's cyber and traditional students who have

completed their Associates in Arts and Applied Science General Studies degree. The t-

Test was also analyzed to determine whether or not a significant difference existed

between their means. Chapter V will provide a Summary, Conclusions, and

Recommendations for the research study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V encompasses the Summary, Conclusions, and Recommendations of the research study. This chapter provides insight into what was discovered based upon the research data which were collected for the study. The chapter also covers what the outcome was based upon the research data, and how it can be utilized in further research studies.

Summary

The purpose of this study was to determine the effects of grade point averages while participating in cyber courses during the completion of degrees at Southside Virginia Community College. The hypothesis of this study was to determine if there will be no significant difference in students' grade point averages at Southside Virginia Community College when they are in classroom or cyber courses.

This study was based upon students attending Southside Virginia Community College in Alberta and Keysville, Virginia. The students who were chosen had completed the Associates in Applied Arts and Science General Studies degree. The research data were based upon students graduating in the time from of Summer 2003 until the Spring of 2006.

Various students were chosen for this research study who had completed their degrees by participating in traditional courses only, while the other students chosen for this study had chosen to partake in five or more cyber courses while completing their degrees. Their GPA's were obtained through Peoplesoft, which is Southside Virginia Community College's student information system. Once the data were collected, they

were separated for analysis. The student's GPAs were based on their cumulative scores of all courses completed while receiving their Associates in Arts and Applied Science General Studies degree. Each group's GPAs were added and divided by the total number of students in each group to determine their means. Once each group's mean was calculated, they were utilized to calculate the t-Test which in turn was used to provide insight as to whether a significant difference existed between cyber and traditional students' academic success.

Conclusions

The hypothesis of the research study was, H_0: There will be no significant difference in students' grade point averages at Southside Virginia Community College when they are enrolled in a classroom or cyber course. The findings of this research study determined that there is a difference in the grade point averages between students who participated in cyber delivered courses verses the traditional students who complete courses in a classroom environment. Based on the data obtained for the study, the mean score for Group I which was cyber students at Southside Virginia Community college was 3.13, where as the mean score for Group II, traditional students, was 3.38. Using this data to calculate the t-Test, the t-score was determined to be -2.55. The value from the calculated t-score did exceed the level of significance at the .05 level which was 1.99. The degree of freedom used to determine this level was 98. Therefore, the researcher rejected the hypothesis stating there was no significant difference between GPA scores of cyber students who attend class online and traditional students who attend class in a classroom setting.

In conclusion, we can say students participating in traditional classroom courses have a higher average GPA upon completion of their degrees. As a result, the delivery format of courses does have a direct impact on a student's academic success. Overall, traditional students have higher levels of academic success verses students who participate in courses delivered in a cyber format.

Recommendations

Based upon the research findings and conclusions of this study, the researcher includes the following recommendations:

1. There should be similar research done which follows students participating in traditional and distance education courses at four-year colleges and universities to determine if course delivery methods effect university students GPA's.

2. There should be similar research done comparing students performance in the same courses in a traditional format and a cyber format to see if there is a difference in students performance taking the same course in different formats.

3. There should be additional research to determine the demographics and backgrounds of students, such as age and job status, who participate in cyber formatted courses verses the traditional formatted courses to determine if demographics have an impact on what format of courses students choose to participate in.

4. There should be additional research to determine the quality of instructional materials available to instructors and students participating in cyber delivered courses to determine if there needs to be an improvement in cyber instructional material to support the improvement of student learning.

5. An introductory instructional module should be developed to explain how cyber courses are taught and the competencies, study skills, and computer capabilities needed by students to take these courses.

6. The results of the study to be used to advise administrators of the importance of offering courses in various formats to benefit different student learning styles.

7. The results of this study should be presented in the campus newspaper to inform students and faculty that course delivery methods can have an impact on academic success of students.

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