

GEORGIA VIRTUAL SCHOOL: BASELINE DATA ON REVENUES AND  
EXPENDITURES

by

JAMES KELLY SIGMAN

(Under the Direction of Walter S. Polka)

ABSTRACT

“No Child Left Behind” legislation continues to be a driving force for school districts, allowing virtual schools to become a tool that supplements the curriculum of local schools by offering everything from remedial courses to advanced placement courses. Over the years, research has begun to show the effectiveness of online learning as compared to traditional classroom instruction, but the issues of funding and cost effectiveness still have questions to be resolved. In 2005, the Georgia legislature passed Senate Bill 33 creating the Georgia Virtual School. The researcher sought to provide decision makers of the Georgia Virtual School baseline data on the revenues and expenditures of the Georgia Virtual School; to compare the expenditure categories of the Georgia Virtual School with expenditure categories from different states; and finally, to make comparisons of the cost per FTE of the Georgia Virtual School with the costs per FTE of the 180 school districts in Georgia. Common descriptive statistics such as percentages, means, and standard deviations were used to analyze Georgia Virtual School revenues, expenditures, and costs per FTE; and a paired sample t-Test was used to determine if any significant differences were found between different categories within the costs per FTE. Results of the study determined the sources, amounts, and percentages of revenues; and the categories, amounts, and percentages of expenditures of the Georgia

Virtual School. The study also determined that the Georgia Virtual School had a lower cost per FTE compared to any of the 180 school districts in Georgia. The researcher recommends further research to determine the cost efficiency of the Georgia Virtual School and continued state appropriations that allow all students in the state of Georgia to take needed courses from the Georgia Virtual School free of student charge.

INDEX WORDS: Georgia Virtual School, Online Education, Virtual School, Funding, Revenues, Expenditures, Costs per FTE

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JAMES KELLY SIGMAN

B.S., Georgia Southern College, 1989

M.Ed., Georgia Southern University, 1990

Ed.S., Georgia Southern University, 2005

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JAMES KELLY SIGMAN

Major Professor: Walter S. Polka

Committee: Linda M. Arthur  
Ralph Gornto

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## DEDICATION

In recognition of her love, unwavering support, patience, and encouragement throughout this process, I hereby dedicate this dissertation to my wife, Doreen Sigman, who is my soul mate, best friend, biggest advocate, and greatest supporter.

In recognition of her love, support, and encouragement throughout all my endeavors, I also dedicate this dissertation to my mother, Gail Sigman, who has been the greatest role model.

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## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS.....	7
LIST OF TABLES .....	12
CHAPTER	
I INTRODUCTION .....	14
Origins of Virtual Schools.....	16
Virtual School Effectiveness .....	17
Virtual School Funding.....	19
Georgia Virtual School.....	21
Statement of the Problem.....	23
Research Questions.....	23
Conceptual Framework.....	24
The Significance of the Study.....	25
Limitations.....	26
Procedures.....	26
Definitions of Terms.....	29
Summary.....	29
II REVIEW OF THE RESEARCH AND RELATED LITERATURE .....	31
Introduction.....	31
Alternative Schools.....	32
Virtual Schools .....	34
Origins of Virtual Schools.....	39

		10
	Virtual School Effectiveness .....	40
	Virtual School Funding.....	46
	Georgia Virtual School.....	53
	Summary.....	56
III	METHODOLOGY .....	59
	Introduction.....	59
	Research Questions.....	60
	Research Design .....	60
	Target Data .....	61
	Data Collection .....	61
	Analysis of the Data.....	61
	Summary.....	62
IV	REPORT OF DATA AND DATA ANALYSIS .....	64
	Introduction.....	64
	Research Questions.....	64
	Research Design .....	65
	Findings .....	65
	Summary.....	95
V	SUMMARY, CONCLUSIONS, AND IMPLICATIONS.....	99
	Summary.....	99
	Analysis of Research Findings .....	100
	Discussion of Research Findings.....	101
	Conclusions.....	104

	11
Implications .....	105
Recommendations.....	106
Dissemination .....	107
Concluding Thoughts.....	107
REFERENCES.....	109
APPENDICES.....	115
A INSTITUTIONAL REVIEW BOARD (IRB) EXEMPTION .....	116
B REQUEST FOR DATA FROM THE GEORGIA VIRTUAL SCHOOL ....	117

## LIST OF TABLES

	Page
Table 1: Georgia Virtual School Revenues without 2007 Tuition.....	66
Table 2: Georgia Virtual School Revenues with 2007 Tuition.....	67
Table 3: Georgia Virtual School Expenditure Categories & Amounts.....	68
Table 4: Georgia Virtual School Executive Level Management Data.....	69
Table 5: Georgia Virtual School Support Management Data.....	70
Table 6: Georgia Virtual School Managerial Expenditure Data.....	72
Table 7: Georgia Virtual School Technology Personnel Data.....	75
Table 8: Georgia Virtual School Technology Personnel Expenditure Data.....	76
Table 9: Georgia Virtual School Technology Equipment Data.....	78
Table 10: Georgia Virtual School Instructional Position Data.....	80
Table 11: Georgia Virtual School Supplemental Instructional Data.....	82
Table 12: State Comparison of Expenditures.....	85
Table 13: Sampling of Georgia School Districts cost per FTE.....	86
Table 14: Descriptive Statistics of Georgia School Districts.....	87
Table 15: Data Used for Cost per FTE Analysis.....	88
Table 16: Descriptive Statistics of GAVS & Georgia School Districts Means.....	88
Table 17: Paired Sample t-Test Data of All Georgia School Districts.....	89
Table 18: Descriptive Statistics by Georgia School District Size.....	90
Table 19: Descriptive Statistics of GAVS & Smaller Sized Georgia School District Means.....	91

Table 20: Descriptive Statistics of GAVS & Average Sized Georgia School Districts

Means..... 91

Table 21: Descriptive Statistics of GAVS & Larger Sized Georgia School Districts

Means..... 92

Table 22: Paired Sample t-Test Data of Smaller Sized Georgia School Districts ..... 93

Table 23: Paired Sample t-Test Data of Average Sized Georgia School Districts ..... 93

Table 24: Paired Sample t-Test Data of Larger Sized Georgia School Districts ..... 94

## CHAPTER I

## INTRODUCTION

*“Education is simply the soul of a society as it passes from one generation to another. Whatever the soul is like, it will have to be passed on somehow, consciously or unconsciously, and that transition may be called education. ... [7/5/1924]”*

- Gilbert K. Chesterton

The twentieth century English writer and thinker, G.K. Chesterton suggests, society uses education as the means to transfer knowledge, values, and ethics to the next generation (Chesterton, 1924). Chesterton echoes Horace Mann’s beliefs and ideas from the early 1900s. Mann believed that public education would create greater wealth within the economy (Kirkpatrick, 2002); that public education was the birth right of every child (Badolato, 2002); and that public education would broaden the national intelligence, which would create an equalizing affect, thus eliminating poverty (Kirkpatrick). Mann’s beliefs for education, which have helped to shape today’s education, created legislation that established high schools, formal teacher training, compulsory school attendance, district libraries, and increased teacher salaries (Kirkpatrick). As education continues to be the conduit that society uses to improve the next generation, schools continuously search for methods to educate all children (Franklin, 1992). Alternative schools have become one popular method of education since the 1960s (Franklin).

Alternative schools can be defined as programs that provide a different ideology and structure than conventional schools. They include compensatory education, vocational education, distance education, and online learning (Trickett, McConahay, Phillips, & Ginter, 1985). Nine effective characteristics of alternative schools have been identified to include the following: smaller size, supportive environment, individualized

curriculum, alternative choices, flexible structure, family support, well defined standards and procedures, specific services, and consistent evaluation (Franklin, 1992). The establishment of alternative schools has emerged through two educational movements: (1) the reactionary movement in rebellion against the impersonal structure found in public schools, and (2) the educational reform movement to improve achievement of all children (Franklin).

Virtual Schools are one example of an alternative school that is growing rapidly (Watson, 2005). According to Watson, online programs in some states are experiencing 50 to 100 percent consistent yearly growth of individual students taking online courses. For example, Louisiana Virtual School has seen increase of 18%, Virtual High School by 24%, Ohio's eCommunity School program by 22%, and Florida Virtual School by over 50% (Watson & Ryan, 2006). It is estimated that 25 percent of public schools have distance education programs (Mupinga, 2005), while 38 states have officially recognized virtual high schools (Watson & Ryan).

As "No Child Left Behind" legislation, signed into law in 2002 by President George W. Bush, continues to be a driving force for school districts, virtual schools are a tool to supplement the curriculum of local schools by offering everything from remedial courses to advanced placement courses (Winogard, 2002). Virtual schools allow students and teachers the flexibility to access class materials anywhere and anytime, especially, for students who attend small rural schools and do not have access to courses that are taught by a "highly qualified" instructor (Winogard).

Virtual schools could be defined as a school where students and teachers are in different locations, where the technology that connects students and teachers are only a

tool and not the main event (Revenaugh, 2003). A more accurate and technical definition of virtual schools is an educational organization that offers K-12 courses through the Internet or Web based methods (Clark, 2001). Different states refer to virtual schools by a variety of titles such as Virtual High Schools, E-Learning, Cyber Schools, Distance Learning, or online learning (Blomeyer, 2002). However, no matter the state label, the mission of virtual schools is to allow students access to network servers in order to find the resources to complete assignments (Blomeyer). Blomeyer points out that resources could include the following: syllabi, course reading assignments, course samples, communication abilities, graphics, audio, and video. Blomeyer continues to mention that students and teachers may access resources, assignments, and technical support 24 hours a day, seven days a week, which gives students a great deal of flexibility, and allows teachers to monitor student progress, through information accessed, time spent in a site, e-mails sent, and chats participated in by the students from the web site using administrative access abilities (Blomeyer).

### Origins of Virtual Schools

In the United States, virtual schools began offering structured programs in 1996 (Clark, 2001). Clark determined that the initial three most widely recognized virtual schools in the United States were the Virtual High School, Florida Virtual School, and COOLSchool (Cyber Oregon Online School).

The Virtual High School, originally called the Concord Virtual School, was established by a consortium of high schools originating in Hudson, Massachusetts (Kozma et al. 2000). The Virtual High School was started with a five-year award of \$7.5 million from the Technology Innovation Challenge Grant given to the Hudson Public

School System and the Concord Consortium (Kozma et al.). In October, 2001, the five year start-up grant expired, causing the VHS to offer a variety of membership options such as the common standard school membership option which charges a \$6,500 annual membership fee for participating high schools. That fee allows each school to enroll 50 students in VHS courses (Blomeyer, 2002; Virtual High School, 2006; Watson, 2005).

The Florida Virtual School started in 1996 as an attempt between two Florida counties that were dealing with school overcrowding, lack of qualified teachers, and a high student dropout rate (Joiner, 2002). The Florida Virtual School was started as a collaboration of six school districts, 15 teachers, and 77 students (Joiner). The Florida legislature appropriates \$6.9 million annually, which allows any Florida student access to online courses free of charge (Joiner).

The COOLSchool (Cyber Oregon Online School), formerly known as CyberSchool (Karlin, 2005), was established by a local teacher from Eugene, Oregon (Joiner, 2002). The teacher was looking to give students equity and access to courses that students could not get at local schools (Joiner). The COOLSchool began with 50 students and increased to 300 students in 50 courses by 2002 (Joiner).

#### Virtual School Effectiveness

For ten years, virtual schools have continually become a part of today's education (Joiner, 2002). With many online programs seeing 50 to 100 percent yearly increases in student enrollment (Watson, 2005), two common questions and concerns dealing with online learning have developed. First, is online learning less effective than traditional methods of learning (Clark, 2002)? Second, how should states develop funding models

that will provide online programs with adequate and equitable funding (Voke, 2003; Watson, 2005; Watson & Ryan, 2006)?

Research of online learning has been lacking real empirical research to determine the effectiveness of virtual schools within the elementary and secondary levels (Smith, Clark, & Blomeyer, 2005). Up until 2004, little research about online learning was supported by controlled, systematic, empirical comparisons that fit the definition of “scientific” (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004). However, several scientific research studies have been conducted to address the concerns about online learning since 2004 (Cavanaugh et al.; Smith, Clark, and Blomeyer).

One such study was conducted by Cavanaugh, Gillan, Kromrey, Hess, and Blomeyer in 2004. The researchers conducted a statistical review, meta-analysis, of web delivered K-12 distance education programs between 1999 and 2004 (Cavanaugh et al., 2004). Cavanaugh et al. attempted to determine how student learning in online programs compared to learning in classroom based programs, and to identify the specific factors that influence student learning. Cavanaugh et al. (2004) conducted a search and collected studies on K-12 distance education programs, and then drew conclusions about the effectiveness of distance education based on the synthesized findings of the studies (Cavanaugh et al.). Cavanaugh et al. found 14 studies that determined 116 independent effects from a combined student sample of 7,561 participants whose participation in a distance education program was compared to students who did not participate in a distance education program. Cavanaugh et al. found “a weighted mean effect size across all results was -0.028, with a standard error of 0.045 and a 95 percent confidence interval from -0.116 to 0.060.” (2004, p. 16). The meta-analysis data showed that distance

education did not either out perform or under perform traditional classroom instruction (Cavanaugh et al.).

In order to encourage more empirical, scientific research, the North Central Regional Educational Laboratory (NCREL) developed a request for a proposal for new, quantitative online learning research in October 2004 (Smith, Clark, & Blomeyer, 2005). The NCREL selected eight proposals to be funded (Smith et al.). A synthesis document was written based on the final research reports submitted by the research teams to the NCREL (Smith et al.). According to Smith, several of the studies are being prepared for submission to peer-reviewed journals. Three of the eight studies dealt directly with comparing student achievement between online learners and traditional face-to-face learners (Smith et al.). One of these was a study by Ferdig, DePietro, and Papanastasiou (Smith et al., 2005). The researchers collected data from five courses that had offerings in face-to-face and online medias in the areas of math, health, and personal finance (Smith et al.). The research team found no significant differences in overall achievement scores between online students and face-to-face students (Smith et al.).

#### Virtual School Funding

As states continue to develop online programs, an issue that continues to face online education is funding (Watson, 2005; Watson & Ryan, 2006). There are two main virtual school funding sources used by states today: state appropriations and course fees or tuition (Watson; Watson & Ryan). States are having problems finding the adequate funding sources to create and maintain virtual programs that cover budgetary areas such as management costs, technical support, development of courses, or the leasing of courses (Thomas, 2002). State full-time equivalent (FTE) funding, federal grants, private

grants, and paid memberships are examples of other types of online program funding that some states use to fund online programs (Watson; Watson & Ryan).

In 2003, the Colorado Online Education Programs Study Committee requested information on the actual costs to creating and implementing an online education program (Adsit, 2003). The report determined that it was too difficult to determine an exact cost of online learning due to the large number of variables connected to online education (Adsit). The researcher attempted to locate information from nationally published research, but found almost nothing that had been published on the costs of K-12 online education. However, Adsit did conclude from the literature that “college level online education programs have all shown that online education is more expensive than traditional education; no known study has shown otherwise” (Adsit, p. 2).

Adsit (2003) determined that although different online programs are not designed the same, all online programs do have the same components including curriculum/content, instruction, course management system/internet service, student support, school administration/secretarial support, and district administration/housing/record keeping/assessment (Adsit). Adsit concluded that four factors affect the per pupil costs within the online programs in Colorado including:

1. Geographic dispersal – Online programs that service students from within a local area are less expensive than programs that serve the entire state.
2. Scale – Fixed administrative expenses are consistent no matter how many students are served, which means the more students in a program, the lower the per pupil costs.

3. Experience/Curriculum – Cyberschools become more cost efficient the longer they are in existence. The costs of curriculum development decrease with time and experience thus lowering per pupil costs.
4. At-risk – In Colorado, a high percentage of students who participate in the online program are at-risk students which require increased student support and administrative support increasing the per pupil costs of online education.

Ohio has completed two of the most comprehensive analyses of virtual school costs (Watson, 2005). The first study conducted by Ohio's Legislative Office of Education Oversight (LOEO) was done to determine and examine the start up costs of Ohio's eCommunity school, while the second study examines the operating costs of Ohio's eCommunity schools (Zajano & Ladd, 2005). The Legislative Office of Education Oversight examined eight of Ohio's eCommunity schools which had a full fiscal year of financial data (Zajano & Ladd). The Legislative Office of Education Oversight has developed eleven spending categories that relate to online learning programs to include technology, instruction, administration, curriculum, education management organization, student support, equipment and supplies, sponsorship, facilities, compliance and accountability, and an "other" category (Zajano & Ladd). The LOEO found that online programs spent an average of \$5,965 per pupil while school districts spent an average of \$8,314 per pupil (Zajano & Ladd).

#### Georgia Virtual School

Georgia began exploring online learning in 1998 when the State School Improvement Panel approved the use of federal funding to examine virtual high school pilot programs (SREB, 2001). The state developed the GAeLearning program where any

school could submit application for not more than ten students per semester to take online courses (Georgia Department of Education, 2004). Limited funding was provided by line item appropriations from the state legislature, thus the reason for the ten students per school limit (Georgia Department of Education).

In 2005, the Georgia General Assembly passed Senate Bill 33 which “authorized the establishment of the Georgia Virtual School; to provide for rules and regulations; to provide for a Georgia Virtual School grant account; and to provide for statutory construction” (Georgia General Assembly, 2005, p. 1). The Georgia Virtual School’s mission “is to provide options and opportunities for all Georgia students with courses that will challenge, engage, and prepare them for the 21<sup>st</sup> century economy” (Georgia Virtual School, 2005, p. 1). In order to operate the Georgia Virtual School, the Georgia Assembly appropriated \$1,385,000 for the Georgia Virtual School program, which was determined by the FTE that a student would typically earn if present in a traditional classroom for that portion of the school day (Georgia General Assembly). During the 2006 legislative session, the Georgia General Assembly appropriated an additional \$800,000 to add two positions and expand the Georgia Virtual School by 2,000 seats for total appropriations of \$2,188,734 for the 2007 budget year (Georgia Senate Budget and Evaluation Office, 2006).

Presently, any Georgia public school student may participate in the Georgia Virtual School free of charge unless the student is taking courses outside of the regular school day or is taking classes during the summer school session. Private or home study students may also participate in the Georgia Virtual School, provided course seats are available after public school student enrollment periods, free of charge unless students are taking

courses outside of the regular school day or taking classes during the summer school session (Georgia Department of Education, 2005). Students who do not qualify for free tuition to the Georgia Virtual School pay course fees of \$300 per ½ Carnegie units (Georgia Virtual School, 2006).

### Statement of the Problem

Online education continues to increase in popularity at rates of 50 to 100 percent a year because of the advantages provided to school systems. These advantages include increased course offerings for students that are not offered by school districts, increased course offerings by school districts that cannot finance specialty courses, increased courses taught by “highly qualified” teachers, and flexible course times for students. Other advantages include addressing school over crowding issues, and removing of barriers for atypical students who do not feel comfortable in traditional classes.

Since online education is such a new concept in public education, most research on online education has focused on the effectiveness of online education as compared to traditional classroom education. There has been little research to determine the most effective funding models for online education, or how costs per pupil in online education may compare to costs per pupil in a traditional school. The researcher has only been able to identify three states that have done any studies or reports that address the revenues and expenditures of online education programs being utilized within that state.

### Research Questions

The researcher proposed to answer the following overarching research question about the Georgia Virtual School program: What are the funding revenues and

expenditures for the Georgia Virtual School program? The following sub-questions were also addressed:

1. What are the funding revenues for the Georgia Virtual School?
2. What are the different areas or categories of expenditures in the Georgia Virtual School?
3. What is the relationship of the Georgia Virtual School expenditures according to the five expenditures areas used in other states?
4. What is the cost per FTE of the Georgia Virtual School, and how does it compare to the cost per FTE of other Georgia school districts?

#### Conceptual Framework

Alternative education has become a method of education that provides a different structure and delivery method than traditional schools use. These alternative ideologies and structures are what many students require to be successful in achieving a meaningful education. Technology has rapidly increased the abilities of individuals from different areas to communicate with ease. The Internet allows people to communicate using multiple media such as text, graphics, voice, video, and animations. Online education allows students and teachers to utilize all of these media to interact and communicate with one another. As different states have successfully implemented online education, the state of Georgia has also implemented an online education program, the Georgia Virtual School. Just as any other educational entity requires revenues to fund the operations of the organization, the Georgia Virtual School also requires revenues to fund the operations of the organization. The revenue sources and organizational expenditures of the Georgia Virtual School were the focus of this study.

## The Significance of the Study

Online education is becoming an alternative that allows school districts across the nation to offer a variety of courses that meet the requirements of “No Child Left Behind” for students. The means by which states choose to fund online programs vary by state which could include legislative appropriations, federal and private grants, or course tuitions. The researcher found a lack of information in the literature that considers or analyzes the funding sources and expenditures of online education programs. This study will add to the baseline data of different revenue sources that are available to online education programs, and the different categories in which spending is done within online education programs.

The passing of Georgia State Senate Bill 33 in 2005 made online education an official part of Georgia’s educational system. The enactment of the Georgia Virtual School Bill provided state appropriations to fund the activities of the Georgia Virtual School in 2006 and an increase in funding for program expansion for 2007 were budgeted for the Georgia Department of Education. This study determined the revenue sources that are currently being used by the Georgia Virtual School; determined the expenditures and the categories of expenditures of the Georgia Virtual School; and determined the cost per FTE of the Georgia Virtual School. This baseline data will help policy makers in the Georgia General Assembly, the Georgia Department of Education, and the Georgia Virtual School determine where funding revenues are originating and where expenditures are being spent in order to make adjustments to the revenues and expenditures of the Georgia Virtual School.

The researcher has spent his entire teaching career teaching Technology Education in both high school and middle school grade levels and realizes the ability that technology has to enhance the education process. Having participated in several online courses, the researcher has experienced the many advantages of online education that can be found in the literature. The researcher also foresees the Georgia Virtual School as an option for his own autistic son to have his physical and behavioral barriers removed allowing him the ability to take higher level thinking courses once he enters high school.

The research will provide baseline data on revenues, expenditures, and cost per FTE for the Georgia Virtual School giving decision makers information to make informed decisions about funding for the Georgia Virtual School. The research will also add to the body of research pertaining to revenues and expenditures in K-12 online education.

#### Limitations

1. This study analyzed data for the Georgia Virtual School only. Hence, the findings may not be pertinent to virtual schools in other states.

#### Procedures

#### Research Design

This study is a quantitative descriptive research designed to collect and organize baseline data concerning the revenues and expenditures of the Georgia Virtual School. A quantitative descriptive research method was used to describe and establish characteristics, correlations, and relationships between variables (Borg, Gall, & Gall, 2004). Financial data concerning funding and expenditures were collected from the Georgia Department of Education and the Georgia Virtual School.

### Population

This study describes the funding revenues and expenditures of the Georgia Virtual School. Since participants in Georgia are able to take qualified courses from the Georgia Virtual School free of charge or pay tuition for non-qualified courses, the population of this study was the target population of participants who take part in the Georgia Virtual School.

### Instrumentation

After being granted permission to gather data from the Georgia Virtual School, financial data related to funding sources, Georgia Virtual School budgets, and Georgia Virtual School expenditures was gathered through existing Georgia Virtual School and Georgia Department of Education data bases and written or verbal communications with the Director of the Georgia Virtual School.

### Data Analysis

The purpose of this study was to provide base line data to help decision makers and policy makers create policies pertaining to funding and expenditures of funds associated with the Georgia Virtual School. The researcher determined funding sources, budgetary categories of Georgia Virtual School expenditures, and Georgia Virtual School per FTE.

In determining Georgia Virtual School funding resources, the researcher examined the data from the Georgia Virtual School to analyze the amounts and the sources from which the funding is provided. The financial sources of Georgia Virtual School funding were categorized as suggested by the literature such as state appropriations, federal appropriations, federal grants, private grants, membership fees, and student paid tuitions. The data was analyzed using basic statistical methods (percentages and standard

deviations) using Statistical Package for the Social Sciences (SPSS), which quickly allowed decision making information by the researcher by using powerful statistics. The data is presented in a narrative form as well as graphical tables.

In determining Georgia Virtual School expenditures, the researcher examined the data from the Georgia Department of Education to determine the amounts and percentages of GAVS expenditures. The expenditures of the Georgia Virtual School were categorized by the GAVS' cost estimate budget which included instruction, course development and maintenance, technology personnel, technology equipment, and management. The researcher also analyzed the different costs within each expenditure category. The data was analyzed using basic statistical methods (percentages and standard deviations) using Statistical Package for the Social Sciences (SPSS), which quickly allowed decision making information by the researcher by using powerful statistics. The data are presented in a narrative form as well as graphical tables.

In analyzing the costs per FTE, the researcher compared costs per FTE from the Georgia Virtual School with costs per FTE from the 180 different school districts in Georgia and an adjusted cost per FTE that removed transportation costs and maintenance and operations costs from the school district cost per FTE. The data were analyzed using basic statistical methods (percentages, means, and standard deviations) using Statistical Package for the Social Sciences (SPSS). The researcher also conducted a pair sample t-Test to determine any correlations and significant differences. The Georgia Virtual School's costs per FTE were placed in tables with costs per FTE of different school districts in Georgia for comparison.

### Definitions of Terms

- (1) Alternative education – programs that provide a different ideology and structure than conventional schools (Trickett, McConahay, Phillips, & Ginter, 1985).
- (2) Cost per FTE – Total costs divided by the total number of FTEs (Bass & Henderson, 2005).
- (3) FTE – Full-time equivalent is standard for measuring enrollment. Each state determines a formula to define how many student hours or days represent an FTE (Bibliographical Center for Research, 2006).
- (4) GAVS – Georgia Virtual School provides Georgia students the ability to take Advanced Placement, College Preparatory, Career and Technical courses online (Georgia Virtual School, 2006).
- (5) Online education – an alternative education that utilizes the Internet and digital communication media to deliver course content to students (Clark, 2002).
- (6) Virtual High School – is an educational organization that offers K-12 courses through the Internet or Web based methods (Clark, 2001).

### Summary

Online education has rapidly become a means for educators to offer a variety of courses to students that a system may not have the ability to offer any other way. Online education gives students the flexibility to complete course work taught by “highly qualified” teachers. Online education’s ability to utilize many different resources to deliver course content helps keep students interested and motivated.

The issue of funding online education has continued to be a problem faced by states in trying to develop appropriate funding models. Presently, states mainly use two different sources to fund online programs: state appropriations and private tuition. The researcher found very little research or literature that addressed K-12 funding for online programs. One study found that due to the many variables associated with online education, it was difficult to determine the exact cost of online education.

In 2005, Georgia enacted legislation that created the Georgia Virtual School. The law allows all public school students the opportunity to take courses free of charge. Presently, the Georgia Virtual School receives revenues from state appropriations, tuition from students who do not qualify for free tuition, and two grants from the BellSouth Foundation and the National Governor's Association. The researcher gathered baseline data pertaining to the revenues and expenditures of the Georgia Virtual School. The researcher also compared the cost per FTE for the Georgia Virtual School with the costs per FTE of the 180 school districts in Georgia. This baseline data could be used by policy makers to make informed decisions about the Georgia Virtual School.

## CHAPTER II

### REVIEW OF THE RESEARCH AND RELATED LITERATURE

#### Introduction

The American education system continues to be the means that society uses to improve each generation by searching for new methods to educate all children (Franklin, 1992). Horace Mann, considered to be the “Father of American Education,” believed that an educated public would create greater wealth within the economy and eliminate poverty by educating the public with broadened national intelligence (Kirkpatrick, 2002). Alternative schools have become one popular means to help educators succeed in the mission to educate all children (Franklin, 1992).

As “No Child Left Behind” legislation, signed into law in 2002 by President George W. Bush, continues to place accountability for student performance on school districts, virtual schools have emerged as one form of alternative education that is growing rapidly (Watson, 2005). Virtual schools allow students and teachers the flexibility and equalization to access courses that may not be otherwise available within a school or school district (Winogard, 2002). As online programs continue to see yearly increases in student enrollment from 50 to 100 percent (Watson), two common questions pertaining to online education have evolved. First, is online education less effective than traditional education (Clark, 2002)? Second, how should states provide funding to online programs that is adequate and equitable (Voke, 2003; Watson, 2005; Watson & Ryan, 2006)?

In order to provide an accurate and comprehensive review of the literature pertaining to online education, the researcher examined a great deal of research and

articles related to virtual schools and online education. Based on the literature found by the researcher, the following areas were included in the review of research and literature: (a) alternative education, (b) what are virtual schools, (c) virtual school origins, (d) virtual school effectiveness, (e) virtual school funding, and (f) Georgia Virtual Schools.

### Alternative Schools

As education continues to be the conduit that society uses to improve the next generation (Chesterton, 1924), schools continuously search for effective methods that will allow the education of all children (Franklin, 1992). Alternative schools have become one such method of education since the 1960's (Franklin). Since the label, alternative education, can be given to a variety of school settings, programs that provide a different ideology and structure than conventional schools is a general definition to describe alternative education (Trickett, McConahay, Phillips, & Ginter, 1985).

Franklin has identified nine effective characteristics of alternative schools which include (Franklin, 1992):

- Small size - Most alternative schools share a small student population compared to traditional schools. The small size is believed to contribute to the supportive school environment.
- Supportive environment - As students, teachers, and administrators participate in different roles within the alternative education environment, close relationships and sense of belonging are created that are typically found in traditional schools.
- Individual programming - Alternative education is designed to allow school policies and curriculum design to go outside the realm of traditional education.

School programs are designed to allow for student paced curriculum and individualized flexible schedules.

- Alternative choices - Students are allowed to choose an educational path such as diploma, GED, or certificate programs that fit the needs of the individual student.
- Flexible structure - Student and teachers participate in a shared decision making process to define and reach the goals of the student as well as decision making abilities on how the school should be run.
- Family and community support - Family members can be invited to participate in specially designed groups or courses. Students may also earn credit by participating in events or courses offered outside the school.
- Well defined standards and procedures - Alternative schools typically have very specific and well defined rules and procedures with specific and well defined consequences for noncompliance of school policy.
- Specific services - Alternative schools provide a very specific program designed to educate the specific population that attends the school.
- Consistent evaluation - Alternative schools typically are held to a different level of accountability, which require the ability of alternative schools to identify and correct problems quickly.

The establishment and popularity of alternative schools have emerged through two educational movements (Franklin, 1992). First, the reactionary movement in rebellion against the impersonal structure found in public schools (Franklin). This reactionary educational movement has brought about the creation of alternative schools such as parochial, military, and upper-socioeconomic preparatory schools (Trickett, McConahay,

Phillips, & Ginter, 1985). Second, the educational reform movement to improve achievement of all children (Franklin). This educational reform movement has brought about the creation of compensatory schools that attempt to educate students who have great difficulty achieving, attending, and behaving in traditional schools (Trickett et al.). As new attempts to create programs that are successful in increasing student achievement, virtual schools are evolving at a rapid rate as one new form of an alternative education program (Watson, 2005; Watson & Ryan, 2006).

### Virtual Schools

Virtual schools are a rather new concept in education, but they are developing at an incredible rate (Watson, 2005). According to Watson, online programs in some states are experiencing 50 to 100 percent consistent yearly growth of individual students taking online courses. For example, Louisiana Virtual School has seen increase of 18%, Virtual High School by 24%, Ohio's eCommunity School program by 22%, and Florida Virtual School by over 50% (Watson & Ryan, 2006). It is estimated that 25 percent of public schools has distance education programs (Mupinga, 2005), while 38 states have officially recognized virtual high schools (Watson & Ryan).

Virtual schools have been defined as schools where students and teachers are in different locations and where the technology that connects students and teachers is only a tool and not the main event (Revenaugh, 2003). However, Clark uses a more accurate and technical definition as an educational organization that offers K-12 courses through the Internet or Web based methods (Clark, 2001). Virtual schools have the ability to allow students access to computer networks that enable students to find resources required to complete assignments created by the teacher (Blomeyer, 2002). The student then has

great flexibility to access resources, which include syllabi, course reading assignments, course samples, communication abilities, graphics, audio, and video at any point, as well as technical support 24 hours a day, seven days a week (Blomeyer). The teachers gain the ability to monitor student progress through information accessed, time spent in a site, e-mails sent, and chats participated in by the students by using administrative access abilities (Blomeyer).

As more states are developing online programs, a variety of titles have been given to virtual school programs including Virtual High Schools, E-Learning, Cyber Schools, Distance Education, or online learning (Blomeyer, 2002). Blomeyer points out that no matter the label given to a state's online program, the mission of virtual schools is to allow students to virtually access resources to complete assignments. Just as states use different titles to label virtual schools, seven different types of virtual schools have been identified (Clark, 2001).

- State sanctioned, state level - These online programs are sanctioned by the state government through legislation or funding to function as the state's virtual school.
- College and university-based - These online programs are offered by colleges and universities. Virtual colleges will make some introductory college level virtual courses available to upper level high school students through dual or concurrent enrollment.
- Consortium and regionally-based - Virtual school consortia can be set up by region, by state, or nationally. Virtual school consortia act as vendors to share courses with the consortium's members or to clients outside the consortium.

- Local education agency-based - These online programs are created by local school districts in order to offer supplemental or alternative courses to the school district's own students or the district's home schooled students.
- Virtual charter schools - These online programs function under the standards set forth by state regulations which are typically different from the regulations for traditional schools. These virtual charter schools can be state-chartered programs sponsored by public school districts, nonprofit organizations, and for-profit organizations.
- Private virtual schools - A few states allow some private virtual schools to offer state approved and accredited high school diplomas, but most private virtual schools provide supplemental courses and instructional materials for home schooled students.
- For-profit providers of curricula, content, tool and infrastructure - For profit schools such as Apex Learning, Class.com, Blackboard, and eCollege have provided many starter courses for state virtual school programs.

### Virtual School Advantages

Part of the success of virtual schools is due to the benefits that are offered to students who take online courses (Watson, 2005). One of the most obvious benefits for students is the flexibility of class time (SREB, 2001). Online learning has classes going twenty-four hours a day, seven days a week. This allows students to access classes whenever it is convenient for the student's schedule. Class flexibility allows students to have a job or take other types of traditional classes (SREB). A second benefit for virtual schools is the ability of students to have access to a variety of courses that a traditional

school may not have the funds or staff to offer otherwise (Winogard, 2001). Most states require virtual school instructors to be certified in the area in which a course is being taught. This allows schools to offer classes taught by a “highly qualified” instructor (Watson, 2005).

Other benefits of online learning include more course offerings for students; greater equity of possible resources; twenty-first century learning skills such as working collaboratively, interacting with others from different backgrounds, and independent learning skills (Voke, 2003); online learning offers students unique resources for learning through a variety of interactivity, asynchrony, ubiquity, and learner control (Mills, 2005); provides real world experience with technology; helps students gain skills needed for the workplace such as accessing real-time information, researching information, developing inquiry skills, developing written communication skills, utilizing multimedia presentation skills, and providing proof of self-motivation (SREB, 2001). An interesting and not so talked about benefit for virtual schools is the lack of barriers that students who are atypical or who feel different in some way have with online courses. In virtual schools, students are not over-weight; students are not deaf; students do not have acne; students do not stutter; nor do students have any other handicaps (Brown, 2000). Brown adds that the lack of these adolescent barriers may not only allow students to be successful in school but even allow students to enjoy school.

### Virtual School Issues

Although virtual schools have many benefits, virtual schools also have issues that need to be considered. One issue that relates to the lack of online education effectiveness is weak course content (Russo, 2001). Most of today’s commercially created online

curriculum was developed for corporate or postsecondary use and has been modified for younger learners. According to Russo, the most effective online curriculum is the curriculum that is developed in-house by high school teachers who teach that subject area.

A second issue affecting virtual schools is a lack of student achievement (SREB, 2001). Studies have found that there is no significant difference between online courses and face-to-face courses (Mills, 2005). In fact, students in virtual high school courses have outperformed students in the areas of technology use and skill areas of internet assessment (Kozma et al., 2000).

A third issue affecting virtual schools is student dropout from online courses (Campbell-Kibler Associates, 2002). Online learning requires a conscientious student because it puts the responsibility for learning on the shoulders of the student (Brown, 2000). Students need to be self-motivated to learn to succeed in online classes which requires a proper advisement from school faculty to promote appropriate student personality with virtual school characteristics.

A fourth issue affecting virtual schools is costs and funding. The promise of lower costs that some forecast is premature; online instruction has many of the expenses associated with regular learning as well as additional costs specific to it (Voke, 2003). Virtual schools do not have buildings to maintain, buses to maintain, gas for buses, or cafeterias to maintain, which should make virtual schools less expensive to run, but that is not necessarily true. Successful students require rich curriculum materials in a variety of media, fairly robust tools for managing their learning day, and an ongoing, two way relationship with a teacher, which costs money (Revenaugh, 2005). If schools already

have the hardware, software, and web access needed for students to effectively use online courses and to ensure the security of student data, courses can be cost effective, depending on the cost of the courses and of the off-site and on-site supports (Campbell-Kibler Associates).

Other issues that virtual schools may have to confront are alignment of online curriculum with state standards, testing needs, and local curricula; operational procedures such as security and monitoring of students; digital technical discrepancies related to access of technology and equity; teacher training for online course development and delivery; and awarding of course credit (SREB, 2001).

#### Origins of Virtual Schools

In the United States, virtual schools began offering structured programs in 1996 (Clark, 2001). Clark (2001) determined that the first three most widely recognized virtual high schools in the United States were the Virtual High School, Florida Virtual School, and COOLSchool (Cyber Oregon Online School).

The Virtual High School, originally called the Concord Virtual School, was established by a consortium of high schools originating in Hudson, Massachusetts (Kozma et al. 2000). The Virtual High School was started with a five year award of \$7.5 million from the Technology Innovation Challenge Grant given to the Hudson Public School System and the Concord Consortium (Kozma et al.). In October, 2001, the five year start-up grant expired causing the VHS to now charge a \$6,500 annual membership fee for participating high schools; this fee allows each school to enroll 50 students in VHS courses (Blomeyer, 2002; Watson, 2005).

The Florida Virtual School started in 1996 as an attempt between two Florida counties that were dealing with school overcrowding, lack of qualified teachers, and a high student dropout rate (Joiner, 2002). The Florida Virtual School was started as a collaboration of six school districts, 15 teachers, and 77 students (Joiner). The Florida legislature now appropriates \$6.9 million annually which allows any Florida student access to online course free of charge (Joiner).

The COOLSchool (Cyber Oregon Online School), formerly known as CyberSchool (Karlin, 2005), was established by a local teacher, Tom Layton, from Eugene, Oregon (Joiner, 2002). The teacher was looking to give students equity and access to courses that students could not get at local schools (Joiner). The COOLSchool began with 50 students and increased to 300 students in 50 courses by 2002 (Joiner).

#### Virtual School Effectiveness

Research on online learning has been lacking real empirical research to determine the effectiveness of virtual schools within the elementary and secondary levels (Smith, Clark, & Blomeyer, 2005). Up until 2004 when the U.S Department of Education hosted an E-learning summit, little research about online learning was supported by controlled, systematic, empirical comparisons that fit the definition of “scientific” (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004). Since 2004, several scientific research studies have been conducted to address the concerns about online learning.

One such study was conducted by Cavanaugh, Gillan, Kromrey, Hess, and Blomeyer in 2004. The researchers conducted a statistical review, meta-analysis, of web delivered K-12 distance education programs between 1999 and 2004 (Cavanaugh et al., 2004). Cavanaugh et al. (2004) was attempting to determine how student learning in

online programs compared to learning in classroom based programs and to identify the specific factors that influence student learning. Cavanaugh et al. (2004) conducted a search and collected studies that fit the definition of scientific research on K-12 distance education programs and then drew conclusions about the effectiveness of distance education based on the synthesized findings of the studies. Only studies that met the following guidelines were included in the meta-analysis (Cavanaugh et al.):

- Be available as a journal article or dissertation in English between 1999 and 2004.
- Compare students in a distance education program with a group that was not in a distance education program.
- Use web based communications with at least 50% of the participants.
- Use quantitative, experimental, or quasi-experimental studies where the N was two or greater.
- Use student academic achievement, motivation, attitude, retention, or conduct as outcome variables.

Cavanaugh et al. (2004) found 14 studies that determined 116 independent effects from a combined student sample of 7,561 whose participation in a distance education program was compared to students who did not participate in a distance education program.

Cavanaugh et al. found “a weighted mean effect size across all results was -0.028, with a standard error of 0.045 and a 95 percent confidence interval from -0.116 to 0.060.”

(2004, p. 16). The meta-analysis data showed that distance education did not out perform or under perform traditional classroom instruction (Cavanaugh et al.).

In October 2004, the North Central Regional Educational Laboratory (NCREL) developed a request for a proposal for new, quantitative online learning research in order to encourage more empirical, scientific research pertaining to online education (Smith, Clark, & Blomeyer, 2005). Within the request for proposals, the following methodological priorities were established by the NCREL (Smith et al.):

- Priority 1 – Fully randomized, experimental designs.
- Priority 2 – High validity and reliability quasi-experimental designs.
- Priority 3 – Correlational and survey research.
- Priority 4 – Mixed method case studies, grounded research, mathematical modeling, and/or other exploratory research strategies.

The NCREL received 33 proposals that were both externally and internally reviewed, but only eight proposals were selected to be funded (Smith et al.). A synthesis document was written based on the final research reports submitted by the research teams to the NCREL (Smith et al.). According to Smith (2005), several of the studies are being prepared for submission to peer-reviewed journals. Three of the eight studies dealt directly with comparing student achievement between online learners and traditional face-to-face learners (Smith et al.).

In one study, *Teaching and learning in collaborative virtual high schools*, by Richard Ferdig and Meredith DiPietro of the University of Florida and Elena Papanastasiou of Intercollege, Cyprus, the research team wanted to compare learner outcomes for online and conventional education and to determine if online learning success can be predicted (Smith et al., 2005). The researchers collected data from five courses that had offerings in face-to-face and online media in the areas of math, health,

and personal finance (Smith et al.). The research team used four online surveys including the Educational Success Prediction Instrument (ESPRI), two versions of the “What Is Happening in the Classroom” (WIHIC), and a parent survey (Smith et al.).

The research team found no significant differences in overall achievement scores between online students and face-to-face students. The research team also found that the ESPRI was 100 percent accurate in predicting the course grades of 202 online students (Smith et al., 2005). The research team suggested that future research should look inside the actual happenings within online and face-to-face classes to determine what factors actually cause the differences in achievement. The research team also recommended that qualitative data be included to collaborate the scientific research design of a study (Smith et al.).

In a second study, *Succeeding at the gateway: Secondary algebra learning in the virtual school*, by Cathy Cavanaugh and Jan Bosnick of the University of North Florida; Melinda Hess and Heather Scott of the University of South Florida; and Kathy Jo Gillan of the Florida Virtual School, the researchers wanted to compare learner outcomes of virtual school students with traditional face-to-face students from the same state (Cavanaugh, Gillan, Bosnick, Hess, & Scott, 2005). The researchers also wanted to compare the performance of students who used a new technological tool to graphing linear equations with those students who did not use the new technological tool (Cavanaugh et al.). The study included 123 virtual students, 16 franchise students, and 98 traditional face-to-face students. When the students had completed 70 percent of the course, the Assessment of Algebraic Understanding (AAU) was given to students. For the

second part of the study, 101 online students participated. Thirty students did not use the graphing toolset while 71 students did use the graphing toolset (Cavanaugh et al.).

The researchers found for the first part of the study that after completing the AAU exam, the virtual group had a means score of 24.08 and the traditional face-to-face group had a mean score of 19.43 (Cavanaugh et al.). Although the data showed the virtual group having a greater achievement rate on the AAU, the researchers expressed caution in drawing conclusions due to the virtual groups  $N=12$  and the traditional face-to-face  $N=97$  (Cavanaugh et al.). For the second part of the study, the researchers found that the online students who used the graphing toolset had a gain of 3.07 points from the pretest to the posttest, while the students who did not use the graphing toolset had a gain of 1.71 points from the pretest to the posttest. The data indicates that the use of the graphical module may help to improve student performance in online Algebra I classes (Cavanaugh et al.).

In the third study, *A study of the effectiveness of the Louisiana Algebra I online project*, by Glenn Kleiman, Rebeca Carey, Alejandra Bonifaz, and Elizabeth Haistead of the Center for Online Professional Education; and Laura O'Dwyer of the University of Massachusetts at Lowell, the researchers wanted to study the effectiveness of the Louisiana Algebra I Online Project (Smith et al, 2005). The Louisiana Algebra I Online Project provides high-quality, standard-based Algebra curriculum via internet to students where there are shortages of highly qualified math teachers in low income rural areas in Louisiana (Smith et al.). The researchers wanted to compare the mathematics learning of students in online classes compared with students in traditional face-to-face classes, and to study the relationships between the way courses are implemented and the effectiveness of student learning. A quasi-experimental design methodology was implemented using a

variety of data gathering instruments including a teacher characteristics survey, an Algebra I in-class teacher survey, an Algebra I online teacher survey, classroom observations, online and in-class teacher telephone focus groups, student pretest and posttest, the Louisiana Educational Assessment Program for Grade 8, Iowa Tests of Basic Skills for Grade 9, student grades, online student surveys, and control student surveys (Smith et al.).

The researchers found achievement increases for online learners in three different analyses (Smith et al.):

1. Posttest scores were higher for online students.
2. Online students had a larger gain between pretest and posttest scores.
3. When pretest scores were statistically held constant, group membership was a significant predictor of students' posttest scores, with the online students scoring higher.

The researchers also found that in-class teachers had greater student achievement when teachers worked with small groups of students, and greater achievement gains were found when online and in-class teachers did more collaborative planning (Smith et al.).

For ten years, virtual schools have continually become a part of today's education system (Joiner, 2002). Research over the past several years is beginning to show that online education is as effective as traditional education (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004; Smith, Clark, & Blomeyer, 2005). A second main concern for online education is the funding models that states develop to provide online programs with adequate and equitable funding (Voke, 2003; Watson, 2005).

## Virtual School Funding

Funding continues to be an issue facing states that are attempting to develop online programs (Watson, 2005; Watson & Ryan, 2006). According to Watson, the two main sources for funding virtual schools by states are (1) state appropriations and (2) course fees or tuitions. States are having problems finding the adequate funding sources to create and maintain virtual programs that cover certain budgetary areas as management costs, technical support, development of courses, or leasing of courses (Thomas, 2002). Other types of funding sources used by some states to fund online programs include state full-time equivalent (FTE) funding, federal grants, private grants, and paid memberships (Watson). Although research pertaining to online education is on the increase, very little has been published on the costs of K-12 online education (Adsit, 2003).

In 2003, the Colorado Online Education Programs Study Committee requested information on the actual costs of creating and implementing an online education program (Adsit, 2003). Although the purpose of the report was to determine actual cyber school costs, the researcher determined that due to the large number of variables associated with program delivery, actual costs of cyber schools were difficult to determine (Adsit).

Ohio has completed two of the most comprehensive analyses of virtual school costs (Watson, 2005). The first study conducted by Ohio's Legislative Office of Education Oversight (LOEO) was done to determine and examine the start up costs of Ohio's eCommunity schools, while the second study examined the operating costs of Ohio's eCommunity schools (Zajano & Ladd, 2005). Eight of Ohio's eCommunity schools that had a full fiscal year of financial data were examined by the Legislative Office of

Education Oversight (Zajano & Ladd). The purpose of the study was to determine if online programs should receive the same state funding that was being allocated to other community schools and school districts (Zajano & Ladd).

The Florida Virtual School (FLVS) is considered the largest state funded online program in the nation (Hacsi, 2004). Between 1997 and 2003, the Florida Virtual School received funding from line item appropriations from the state legislature (Hacsi). During the 2002–2003 school year, the Florida Virtual School spent much time developing a funding model that would allow for continued growth, quality assurance, and continued support from Florida school districts (FLVS, 2003). The FLVS created a performance-based funding model that gave FTE funding to the FLVS based on students who successfully completed FLVS taught online courses (FLVS, 2003).

#### Virtual school revenues

Most online programs are funded through two main revenue sources: (1) state appropriations, and (2) tuitions or course fees. However, federal grants, private grants, and paid memberships are other types of revenue sources (Watson, 2005; Watson & Ryan, 2006). Some states, such as Florida, use state appropriations to fund the Florida Virtual School. The state appropriations for the FLVS allow any student, including private school and home schooled students, to participate in online courses free of charge (FLVS, 2003). Many states not only receive state appropriations for online programs, but also charge tuition or course fees to students or school districts (Clark, 2001). Most states charge tuition of \$300 per course semester to take online classes (Clark).

Although state appropriations and tuition fees are the most common source of revenues for virtual schools, federal grants are also available (Zajano & Ladd, 2005). In

Ohio, eCommunity schools received \$45,079,105 in funding during 2003; \$2,442,424 came from federal grants (Zajano & Ladd).

Membership fees or consortium memberships is another method for gaining revenues (Kozma et al. 2000; Watson, 2005; Zajano & Ladd, 2005). The Virtual High School in Massachusetts was started with a five year award of \$7.5 million from the Technology Innovation Challenge Grant given to the Hudson Public School System and the Concord Consortium (Kozma et al.). Once the five year start-up grant expired in October of 2001, the VHS began charging a \$6,500 annual membership fee for participating high schools. This membership fee allows each school to enroll 50 students in VHS courses (Blomeyer, 2002; Virtual High School, 2006; Watson, 2005).

#### Virtual school expenditures

As states continue to implement and develop online programs, the cost of such programs can vary depending on the variations of delivery of virtual courses (Adsit, 2003). After reviewing the literature pertaining to the funding of online education, five different areas of expenditures for online programs were evident including (a) curriculum, (b) instruction, (c) course management/technology, (d) student support, and (e) administration (Adsit, 2003; FLVS, 2003; Zajano & Ladd, 2005).

The first area of online education expenditures is curriculum (Adsit, 2003; FLVS, 2003; Zajano & Ladd, 2005). Online curriculum has evolved a great deal over the past ten years (Adsit, 2003). Online curriculum has gone from an online syllabus to curriculum that utilizes the most effective teaching practices and online resources (Adsit). According to Adsit, virtual schools have several means to secure curriculum for different courses including self created curriculum, leased curriculum, purchased curricula, and

outsourced curriculum. However, once curriculum development has taken place, curriculum expenditures decline (Zajano & Ladd, 2005). In fact, the Florida Virtual School considers currently developed courses an asset to the program (FLVS, 2003). Once a virtual school has developed an online course, the course could be considered a revenue if that course is leased or sold to other online education programs (Adsit; FLVS; Zajano & Ladd).

The second area of online education expenditures is instruction (Adsit, 2003; FLVS, 2003; Zajano & Ladd, 2005). One of the greatest expenses pertaining to online education is instruction (Adsit, 2003). Adsit points out that if a virtual school program is using “highly qualified” certified teachers and is keeping student/teacher ratios comparable to traditional class sizes, online education instruction costs should be about the same as traditional instructional costs. Although Adsit claims instruction is the greatest cost, Ohio’s LOEO found instructions costs to be the second highest expense (Zajano & Ladd, 2005). Ohio’s LOEO found that instruction costs made up 22.9% of Ohio’s eCommunity’s total expenditures. The LOEO found that the greatest expense, on average, was technology at 27.6% of Ohio’s eCommunity’s total expenditures, but most of the eCommunity’s individual virtual school providers did show instruction as the highest expenditure (Zajano & Ladd).

The third area of online education expenditures is course management and technology (Adsit, 2003; FLVS, 2003; Zajano & Ladd, 2005). A course management system allows an online course to be maintained and accessed (Adsit). There are several different choices that a school can use to provide course management (Adsit). These choices could include a school’s choosing to maintain its own system using templates and

web pages, or a system to use a fully outsourced platform, curriculum, and instruction (Adsit). Course management costs can be fixed or variable depending on the type of course management chosen by a school. Per pupil costs pertaining to the areas of course management can range from \$20 to \$150 per student (Adsit). In Ohio, eCommunity school's course management uses 8.0% of the total expenditures budget (Zajano & Ladd). It would stand to reason that virtual schools would have large technological needs including internet access, computers, monitors, printers, and software for curriculum and security (Zajano & Ladd). Ohio's LOEO found that Ohio's eCommunity schools spent 27.6% of budgetary expenditures on technology (Zajano & Ladd). In the Florida Virtual School, it is reported to have 167 computers, two LCD projectors, and one stamp machine as technological assets in 2003 (FLVS, 2003).

The fourth area of online education expenditures is student support (Adsit, 2003; FLVS, 2003; Zajano & Ladd, 2005). The Virtual High School, based in Massachusetts, credits a portion of its success to student support in terms of technological and academic student support (Kozma et al. 2000). However, the difference between the Virtual High School and other virtual schools is that Virtual High School students take courses on a traditional school campus where a site coordinator is available while students in other virtual schools take courses away from campus where student support can be difficult to obtain (Adsit). According to Adsit, the way to help achieve student success is to reduce the student/teacher ratio which increases student/teacher interaction. Colorado has determined a theoretical cost of \$600 per FTE to provide a variety of student support services such as mentoring and social work (Adsit), while Ohio's LOEO found the state's

eCommunity schools spent an average of 7.7% of budgetary expenditures on student support (Zajano & Ladd).

The fifth area of online education expenditures is administration (Adsit, 2003; FLVS, 2003; Zajano & Ladd, 2005). Just as traditional schools need personnel to manage programs, supervise instruction, complete scheduling, and report grades, virtual school programs need the same type of support (Adsit; Zajano & Ladd). Ohio's eCommunity schools have reported spending 1.8% to 21.3% of total spending on administration with an average spending of 15.6% statewide (Zajano & Ladd) while Colorado has calculated an approximate projection of \$400 to \$800 per FTE for administrative costs (Adsit).

As states set online program budgetary expenditures to coincide with online program revenues, per pupil costs can be affected by several different factors (Adsit, 2003):

- Geographic dispersal – Online programs that serve students from within a local area are less expensive than programs who serve the entire state. Keeping a local focus for online education programs cuts down on the costs of long distance phone expenditures, shipping costs, in-home technical support, and academic support.
- Scale – Fixed administration expenses are consistent no matter how many students are served, which means more students in a program lowers the per pupil cost.
- Experience/Curriculum – Online education programs become more cost efficient the longer it is in existence. The costs of curriculum development increase with time and experience thus lowering per pupil costs. For example, Florida Virtual

School has now begun to lease the FLVS' curriculum to other states and online programs, thus making the FLVS' curriculum a monetary asset and less of a liability (FLVS, 2003).

- At-risk students – If an online program experiences a high percentage of at-risk student participants, the increased student and administrative support will cause an increase in the per pupil cost.

In determining whether online education is more cost effective than traditional school costs, the literature shows mixed findings depending on the state being analyzed (Adsit, 2003; FLVS, 2003; Zajano & Ladd, 2005). In 2003, Colorado estimated a FTE cost per pupil in Cyber schools to range from \$6,000 - \$6,400 (Adsit). In 2003, the Florida Virtual School reported to the Florida legislature a cost per FTE in the FLVS to be \$7,757.75 in fiscal year 2000-2001, but dropping to \$5435.72 in the 2002-2003 fiscal year (FLVS). However, the Florida public school system average per FTE was \$5217.91 during fiscal year 2002-2003 (FLVS). In 2005, the LOEO found that online eCommunity schools spent an average of \$5,965 per pupil while school districts spent an average of \$8314 per pupil (Zajano & Ladd).

In October of 2002, the U.S. Department of education with [Converge Magazine] hosted a Virtual Schools Forum in Denver, Colorado. A number of virtual education stakeholders were brought together to begin creating a national virtual school agenda to discuss issues pertaining to virtual education including equity, funding, and quality (U.S. Dept of Ed, 2002). During the forum, several recommendations were suggested related to the federal government's role in virtual education including (U.S. Dept of Ed):

1. The federal role in funding virtual education should be studied.

2. Identify different state funding models and legislation to determine a framework that can be used by other states developing online education programs.
3. Accountability, quality, and equity issues before attempting to develop a funding model.
4. Study and report the benefits and costs of virtual course delivery to provide data on efficiencies and economies of different sized programs.

### Georgia Virtual School

#### History of Georgia Virtual Schools

Georgia started exploring online learning in 1998 when the State School Improvement Panel approved the use of federal funding to examine virtual high school pilot programs (SREB, 2001). In 1998-1999, the state of Georgia decided to contract with the Concord Virtual High School Consortium, originating from Massachusetts, to provide teacher training and the opportunity for students to participate in online courses (SREB). Some school districts offered online courses from private vendors other than Concord VHSC, while some school districts developed their own online courses (SREB).

In 2000, the Georgia Department of Education wanted a point of contact to help facilitate appropriations of state funds in 2001 for the Georgia Virtual Schools (SREB, 2001). The Georgia DOE wanted this point of contact to be from a part of the state that desired to develop virtual high schools with technology in its schools. A contract with Southwest Georgia Regional Education Service Agency was proposed which included a long term implementation plan for online services, but the State Board of Education did not approve the proposed contract (SREB). In July of 2000, the State Board of Education appointed a second steering committee to review the desirability and feasibility of online

courses in the state. The findings of the steering committee were used to shape state guide-lines for Georgia Virtual Schools (SREB).

In 1998-1999, the Georgia Virtual Schools had 35 teachers participating in the program. However, this first year of participation was dedicated to training and development of courses with students beginning to take classes during the 1999-2000 school year (SREB, 2001). In 1999-2000, sixteen teachers were teaching fifteen courses in thirteen high schools to 282 students. Georgia ranked third in the nation in terms of number of web-based courses offered (SREB). In 2000-2001, twenty-five teachers were teaching twenty-five courses in twenty-one high schools to 500 students (SREB).

Any school was allowed to submit an application to take online courses through GAeLearning (Georgia Department of Education, 2004). Schools were limited to ten student spots per semester. Courses were tuition free to both the schools and students due to line item appropriations from the state legislature (Georgia Department of Education). The limited funding by the state was the reason for the limited number of positions a school may use. Any ninth through twelfth grade student in Georgia public high school was eligible to take online courses (Georgia Department of Education). Students were allowed to take only one online course a year. Students were able to take classes in a variety of core content classes such as writing composition, world and U.S. history, math, and many advanced placement courses (Georgia Department of Education).

#### Senate Bill 33: Georgia Virtual Schools

During the 2005 session of the Georgia General Assembly, Senate Bill 33, proposed by Dan Moody, John Douglas, Don Balfour, George Hooks, and John Bulloch, was passed into law. Senate Bill 33 “authorized the establishment of the Georgia Virtual

School; to provide for rules and regulations; to provide for a Georgia Virtual School grant account; and to provide for statutory construction” (Georgia General Assembly, 2005, p 1).

Section one of the bill designates the specific time frame dates that the State Board of Education is to count students enrolled in online courses for FTE funding. The initial enrollment count shall be made after October 1 but not after November 17 and the final enrollment count shall be made after March 1 but not after May 1 (Georgia General Assembly, 2005). This section of the bill designates that each online course will count for a one-sixth segment of the school day, the same value given for face-to-face courses.

Section two, paragraph (a) of the bill authorizes the Georgia State Board of Education to establish the Georgia Virtual School where students can enroll in state funded courses via the Internet or in any other manner not involving on-site interaction with a teacher (Georgia General Assembly, 2005). This would allow the Georgia Virtual School to utilize different forms of communications to deliver course work to students. Section two also allows “any Georgia student who is age 21 or younger to be eligible to enroll in the Georgia Virtual School, at no cost to the student, provided that public school students shall be given priority” (Georgia General Assembly). The clause “provided that public school students shall be given priority” was added after a two hour Senate debate. The debate was over the provision of the bill that would allow home school students and private school students to take online courses at no cost. This was a problem for several Senators because this essentially allowed a “virtual voucher” for students other than public education students. The Senate finally agreed to the floor amendment that gives public school students priority for registration (Rooks & Harrison, 2005). Although SB

33 allows students to take online courses free of charge, the bill put a limit of six online courses per year on students that can be taken for free. The bill gives the State Board of Education the authority to set a tuition rate for classes taken over six. The bill also authorized the Professional Standards Commission to certify all instructors who teach through the Georgia Virtual School program, but no specific certification requirements were mandated in the bill (Georgia General Assembly, 2005).

Section two, paragraph (b) of the bill authorized the funding sources for the GVS. The bill gives the DOE authorization to setup a Georgia Virtual School grant account with funds appropriated by the General Assembly. The General Assembly appropriated \$1,385,000 for the Georgia Virtual School program, which was determined by the FTE that a student would typically earn if present in a traditional classroom for that portion of the school day (Georgia General Assembly, 2005). During the 2006 legislative session the Georgia General Assembly appropriated an additional \$800,000 in order to add two positions and expand the Georgia Virtual School by 2000 seats for total appropriations of \$2,188,734 for the 2007 budget year (Georgia Senate Budget and Evaluation Office, 2006).

### Summary

In this chapter, the researcher has presented a review of the literature pertaining to online education within the following areas: (a) alternative education, (b) what are virtual schools, (c) virtual school origins, (d) virtual school effectiveness, (e) virtual school funding, and (f) Georgia Virtual Schools.

The review of the literature pertaining to online education has shown that a major reason for the rapid increase in virtual schools is due to the flexibility that online

education offers students, teachers, and school districts. Virtual schools allow students to take courses not normally offered by the student's traditional school and school districts to offer courses taught by "highly qualified" teachers that normally the school district could not afford to offer.

Empirical research is beginning to show that student achievement in virtual school environment is equivalent to the achievement of students in traditional school environments. The literature has also shown that states are having problems finding the adequate funding sources to create and maintain virtual programs that cover certain budgetary areas as management costs, technical support, development of courses, or leasing of courses. Presently, states are using either state appropriations or student tuitions to fund virtual school programs.

In 2005, the Georgia General Assembly passed into law Senate Bill 33 which authorized the establishment of the Georgia Virtual School. Although the Georgia Department of Education had had a virtual school program since 1998, Senate Bill 33 not only gave the Georgia Virtual School legitimacy, but also gave the Georgia Virtual School a means of funding through state appropriations of \$1,385,000. In 2006, the Georgia Department of Education asked and received an additional \$800,000 in state appropriations for Georgia Virtual School expansion.

The researcher has only been able to locate three documents pertaining to K-12 funding of online education programs. Within the literature found pertaining to K-12 online education funding, confirmation of the lack of research regarding funding was found. It is the desire of the researcher to not only provide baseline data on the Georgia

Virtual School's revenues and expenditures to decision makers, but to also add to the body of research pertaining to K-12 online education.

## CHAPTER III

### METHODOLOGY

#### Introduction

“No Child Left Behind” continues to be a driving force in the American education system, rapidly making online education a useful tool as states attempt to meet “annual yearly progress” (Watson, 2005; Watson & Ryan, 2006). Virtual schools allow school systems to have the flexibility to offer courses that a school system might not normally be able to offer students taught by “highly qualified” teachers (Winogard, 2002).

As more states adopt and implement online education programs, the issue of adequate and equitable funding continues to be an issue (Voke, 2003; Watson, 2005; Watson & Ryan, 2006). States use several methods to provide funding for virtual schools including state appropriations, tuition fees, FTE funding, federal grants, and membership fees (Adsit, 2003; Watson, 2005; Watson & Ryan, 2006).

In 2005, the Georgia General Assembly enacted legislation that established the Georgia Virtual School (Georgia General Assembly, 2005). The researcher proposes to gather baseline data from the Georgia Department of Education to determine the Georgia Virtual School’s funding revenues, expenditures, and cost per pupil.

This chapter contains the following sections: (a) the research design, (b) target data, (c) data collection procedures, and (d) method of data analysis. The chapter concludes with a brief summary of the methodology used for the study.

## Research Questions

The researcher answered the following overarching research question about the Georgia Virtual School program: What are the funding revenues and expenditures for the Georgia Virtual School program? The following sub-questions were also addressed:

1. What are the funding revenues for the Georgia Virtual School?
2. What are the different areas or categories of expenditures in the Georgia Virtual School?
3. What is the relationship of the Georgia Virtual School expenditures according to the five expenditures areas used in other states?
4. What is the cost per FTE of the Georgia Virtual School, and how does it compare to the cost per FTE of other Georgia school districts?

## Research Design

This is a quantitative descriptive research study designed to collect and organize baseline data concerning the revenues, expenditures, and demographic data of student utilization of the Georgia Virtual School. A quantitative descriptive research method helped to describe and establish characteristics, correlations, and relationships among variables (Borg, Gall, & Gall, 2004). Glesne (2006) points out that quantitative research uses a conceptual framework to direct the research process and forms the parameters within which the research is conducted. Financial data concerning funding and expenditures were collected from the Georgia Department of Education and the Georgia Virtual School.

### Target Data

This study describes the funding revenues and expenditures of the Georgia Virtual School. Since participants in the Georgia Virtual School are able to take qualified courses from the Georgia Virtual School free of charge or pay tuition for non-qualified courses, the population of this study was the target population of all participants in the Georgia Virtual School.

### Data Collection

Upon approval from the Institutional Review Board (IRB), the researcher obtained permission to receive data from the Georgia Virtual School. The researcher was looking to gather financial data related to Georgia Virtual School funding sources, budgets, and expenditures from the Georgia Virtual School. The researcher also gathered data from the Georgia Department of Education website pertaining to costs per FTE of Georgia school districts.

### Analysis of the Data

The purpose of this study was to provide base line data to help decision makers and policy makers create policies pertaining to funding and expenditures of funds associated with the Georgia Virtual School. The researcher determined the funding sources, budgetary categories of Georgia Virtual School expenditures, and Georgia Virtual School cost per FTE.

In determining Georgia Virtual School funding sources, the researcher examined the data from the Georgia Virtual School to analyze the amounts and the sources from which funding is provided. The financial sources of Georgia Virtual School funding were categorized by state appropriations, grants, and student paid tuitions. The data was

analyzed using basic statistical methods (percentages and standard deviations) using Statistical Package for the Social Sciences (SPSS). The data is presented in a narrative form as well as graphical tables.

In determining Georgia Virtual School expenditures, the researcher examined the data from the Georgia Virtual School to determine the amounts and percentages of GAVS expenditures. The expenditures of the Georgia Virtual School were categorized into management, course development and maintenance, technology personnel, technology equipment, and instruction. The researcher also analyzed the different costs within each expenditure category. The data was analyzed using basic statistical methods (percentages and standard deviations) using Statistical Package for the Social Sciences (SPSS). The data is presented in a narrative form as well as graphical tables.

In analyzing the costs per FTE, the researcher compared costs per FTE from the Georgia Virtual with costs per FTE from different school districts in Georgia. The data was analyzed using basic statistical methods (percentages, means, and standard deviations) using Statistical Package for the Social Sciences (SPSS). The researcher also conducted a pair sample t-Test to determine any correlations and significant differences. The Georgia Virtual School's costs per FTE were placed in tables with costs per FTE of different school districts in Georgia for comparison.

### Summary

In this chapter, the researcher presented the research study design and methodology. The researcher's intent was to provide baseline data on the Georgia Virtual School's revenues, expenditures, and costs per FTE in order to provide decision makers

information to make informed decisions about funding for the Georgia Virtual School and add to the body of research pertaining to funding in K-12 online education.

The researcher requested information from the Georgia Virtual School and analyzed the data according to the different categories found in the review of literature. Using the Statistical Package for the Social Sciences (SPSS), the data was analyzed using basic statistical methods. The researcher presented the results of the data analysis in Chapter IV.

## CHAPTER IV

### REPORT OF DATA AND DATA ANALYSIS

#### Introduction

Online education is rapidly becoming a useful tool as states attempt to meet “annual yearly progress” set forth by “No Child Left Behind” legislation. Virtual schools allow school systems to have the flexibility to offer courses that are taught by “highly qualified” teachers and that a school system might not normally be able to offer students. In 2005, the Georgia General Assembly enacted legislation that established the Georgia Virtual School. As online education continues to become a popular tool for education, the issue of adequate and equitable funding continues to be an issue. The researcher analyzed cost estimates, Georgia Department of Education expenditure reports, and notes from the Georgia Virtual School proposed funding model to determine revenues, expenditures, and expenditure categories for the Georgia Virtual School in order to determine the revenues and expenditures of the Georgia Virtual School.

#### Research Questions

The researcher wanted to answer the following overarching research question about the Georgia Virtual School program: What are the funding revenues and expenditures for the Georgia Virtual School program? The following sub-questions were also addressed:

1. What are the funding revenues for the Georgia Virtual School?
2. What are the different areas or categories of expenditures in the Georgia Virtual School?

3. What is the relationship of the Georgia Virtual School expenditures according to the five expenditures areas used in other states?
4. What is the cost per FTE of the Georgia Virtual School, and how does it compare to the cost per FTE of other Georgia school districts?

### Research Design

This study is a quantitative descriptive research designed to collect and organize baseline data concerning the revenues and expenditures of the Georgia Virtual School. The researcher formally requested financial data from either the Georgia Virtual School or the Georgia Department of Education (see Appendix B) in order to analyze financial data concerning revenues and expenditures for the Georgia Virtual Schools. Data was provided by the Georgia Virtual School and analyzed by the researcher. Statistics of the data are reported in narrative and graphical forms.

### Findings

This study was designed to provide and analyze baseline data for revenues and expenditures of the Georgia Virtual School. The Georgia Virtual School provided the researcher with several pieces of information with the agreement that the data provided to the researcher would be kept as confidential as possible.

#### Georgia Virtual School Revenues

The researcher sought to determine from what areas and percentages the Georgia Virtual School received revenues. Based on the data provided by the Georgia Virtual School, the GAVS has current revenues of \$2,804,734. The GAVS reports revenues from five different areas that include 1) \$2,188,734 in state appropriated funds (77%); 2) \$286,000 in collected tuition in 2006 (10%); 3) \$100,000 in grants from the BellSouth

Foundation (4%); 4) \$100,000 in grants from the National Governor's Association (4%); and 5) \$130,000 in encumbered funds from 2006 budget (5%).

The Georgia Virtual School data also showed that, thus far, the GAVS has collected \$105,000 in tuition in 2007. The 2007 tuition changes the overall GAVS revenues to \$2,909,734 with six different areas including 1) \$2,188,734 in state appropriated funds (76%); 2) \$286,000 in collected tuition in 2006 (10%); 3) \$105,000 in collected tuition in 2007 (4%); 4) \$100,000 in grants from the BellSouth Foundation (3%); 5) \$100,000 in grants from the National Governor's Association (3%); and 6) \$130,000 in encumbered funds from the 2006 budget (4%). It is anticipated that the GAVS' 2007 tuition revenues will increase once summer session registration is completed, because summer sessions of the GAVS are not free to students. Table 1 indicates the actual revenues and percentages of revenues for the Georgia Virtual School excluding the tuition paid in 2007. Table 2 indicates the actual revenues and percentages of revenues for the Georgia Virtual School including the tuition paid thus far in 2007.

Table 1

Georgia Virtual School Revenues without 2007 Tuition

Category	Actual Revenues	Percentage of Revenues
State Appropriations	\$2,188,734	77%
Tuition – 2006	\$286,000	10%
BellSouth Foundation Grant	\$100,000	4%
National Governor's Association Grant	\$100,000	4%
Encumbered Funds - 2006	\$130,000	5%

Table 2

Georgia Virtual School Revenues with 2007 Tuition

<u>Category</u>	<u>Actual Revenues</u>	<u>Percentage of Revenues</u>
State Appropriations	\$2,188,734	76%
Tuition – 2007	\$105,000	4%
Tuition – 2006	\$286,000	10%
BellSouth Foundation Grant	\$100,000	3%
National Governor's Association Grant	\$100,000	3%
Encumbered Funds – 2006	\$130,000	4%

Georgia Virtual School Expenditures

The researcher sought to determine the expenditures and areas of expenditure for the Georgia Virtual School and to compare any relationships of GAVS' expenditures with the expenditures from other states. The Georgia Virtual School has divided expenditures into five different categories: 1) Management with an estimated 2007 cost of \$759,365 (26%); 2) Course Development and Maintenance with an estimated 2007 cost of \$296,562.50 (10%); 3) Technology Personnel with an estimated 2007 cost of \$178,062.50 (6%); 4) Technology Equipment with an estimated 2007 cost of \$294,750 (10%); and 5) Instruction with an estimated 2007 cost of \$1,376,180 (48%). Table 3 indicates the categories and amounts of expenditures and the percentages each category uses. The Georgia Virtual School provided the researcher with cost estimates that were used in creating the GAVS' funding model. As discussion of GAVS expenditures continues, the amounts presented are based on an average teacher salary of \$45,000 or 1 FTE.

Table 3

Georgia Virtual School Expenditure Categories & Amounts

Category	Expenditure Amount	Budget Percentage
Management	\$759,365.00	26%
Course Development & Maintenance	\$296,562.50	10%
Technology Personnel	\$178,062.50	6%
Technology Equipment	\$294,750.00	10%
Instruction	\$1,376,180.00	48%

### Management

The first category of expenditures for the Georgia Virtual School is the area of management. Management is divided into two different categories, executive level and management support. The executive level management includes the positions of Principal who has a budgeted salary of \$90,000; two Academic Coordinators who has a budgeted salary of \$78,750 each and a combined budgeted salary of \$157,500;

Testing/Data/Human Resources Coordinator who has a budgeted salary of \$56,250;

Technology Coordinator who has a budgeted salary of \$67,500; Budget Analyst who has a budgeted salary of \$45,000; Human Resource Director who has a budgeted salary of \$67,500; and a Professional Development Director who has a budget salary of \$56,250.

Table 4 will give a brief job description, FTE salary, and estimated salary of executive level management. The management support category includes the positions of

Bookkeeper who has a budgeted salary of \$36,000; Administrative

Assistant/Communication who has a budgeted salary of \$31,500;

Warehouse/Shipping/Procurement Manager who has a budgeted salary of \$11,250;

Human Resource Clerical who has a budgeted salary of \$31,500; and Receptionist who has a budgeted salary of \$22,500. Table 5 will give a brief job description, FTE salary, and estimated salary of support management. Presently, the Georgia Virtual School has budgeted approximately \$495,000 per year in management salaries. Although the Georgia Virtual School has placed the positions of Human Resource Director, Professional Development Director, Human Resource Clerical, and Receptionist into the budget, these positions are not expected to be filled until the GAVS reaches a predetermined size.

Table 4

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Georgia Virtual School Executive Level Management Data

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Position	Brief Job Description	FTE Salary	Estimated Salary
Principal	Oversees the GAVS. Functions in a Superintendent role as the program grows.	2.0	\$90,000
Academic Coordinator 1	Oversees core curriculum areas of Math, Science, Social Studies, and Language Arts. Also, evaluates teachers, support team management, FTE coordination, course development manager, student support, and discipline.	1.75	\$78,750
Academic Coordinator 2	Oversees curriculum in World Languages, Business, PE/Health, AP courses, and Electives. Also, evaluates teachers, coordinates hospital homebound, special education, public relations, discipline, grants, professional development, and teacher training.	1.75	\$78,750

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Table 4 (continued)

Georgia Virtual School Executive Level Management Data			
Position	Brief Job Description	FTE Salary	Estimated Salary
Testing/Data/ HR Coordinator	Manages testing, grade reporting, data collection and reporting. Also, liaison with Educational Technology Training Centers, Human Resource manager, SACS accreditation, and program evaluation.	1.25	\$56,250
Technology Coordinator	Oversees the technology functions of the program.	1.5	\$67,500
Budget Analyst	Coordinates all aspects of the financial management of the school.	1.0	\$45,000
HR Director	Oversees all Human Resource functions of the school. (This position is not presently occupied. Reserved for when the GAVS reaches a certain size.)	1.5	\$67,500
Professional Development Director	Oversees professional development, meetings, conferences, and presentations for the school. (This position is not presently occupied. Reserved for when the GAVS reaches a certain size.)	1.25	\$56,250

Table 5

Georgia Virtual School Support Management Data			
Position	Brief Job Description	FTE Salary	Estimated Salary
Bookkeeper	Tracks all accounting activities.	0.8	\$36,000
Administrative Assistant/ Communication	Serves as front-line communications such as answering phone and sharing information with the public.	0.7	\$31,500

Table 5 (continued)

Georgia Virtual School Support Management Data			
Position	Brief Job Description	FTE Salary	Estimated Salary
Warehouse/ Shipping/ Procurement	Manages inventory, shipping, and receiving of student materials.	0.25	\$11,250
Human Resource Clerical	Assists with communication and general operations of the program. (This position is not presently occupied. Reserved for when the GAVS reaches a certain size.)	0.7	\$31,500
Receptionist	Assists with communication and general operations of the program. (This position is not presently occupied.)	0.5	\$22,500

The Georgia Virtual School has budgeted approximately \$274,850 for managerial expenditures such as travel costs which have a budget of \$18,000; supplies which have a budget of \$1,350; equipment which have a budget of \$18,000; assessment and evaluation which have a budget of \$50,000; facilities and utilities which have a budget of \$40,500; insurance which have a budget of \$12,000, legal services which have a budget of \$50,000; strategic planning which have a budget of \$10,000; postage which have a budget of \$12,000; office security which have a budget of \$12,000; and print advertising, marketing, and public relations which have a budget of \$50,000. Table 6 will give a brief description, budgeted cost, and any miscellaneous details about a category.

Table 6

## Georgia Virtual School Managerial Expenditure Data

Category	Brief Description	Amount Budgeted	Miscellaneous Info
Travel	Required to manage the school and attend state and national meetings. Will help the GAVS gain visibility.	\$18,000	Predicts a \$36,000 budget as the school increases.
Supplies	Includes paper, pens, staples, ink cartridges, etc. Budget is based on \$150 per person.	\$1,350	Initial budget of \$10,000.
Equipment	Includes copy machines, desks, chairs, fax machines, and other office equipment. Also includes a media studio for online course development. Budget is based on \$2,000 per person.	\$18,000	Initial budget of \$10,000.
Assessment & Evaluation	Includes an annual third party evaluation to ensure proper school goal achievement.	\$50,000	Funded from BellSouth Grant
Facilities & Utilities	Budget is based on an estimate of 300 square feet per person working in the office, and \$15 per square foot.	\$40,500	
Insurance	Liability insurance.	\$12,000	Predicts future costs of \$45,000.
Legal Services	Legal services may be required to handle RFPs, Memorandums of Agreement, contracting, licensing agreements, parent issues, and special education issues.	\$50,000	Hopes to utilize the state Attorney General for some services.
Strategic Planning	Determined to make the GAVS run more efficiently and cut down on waste.	\$10,000	Initial budget of \$25,000.

Table 6 (continued)

## Georgia Virtual School Managerial Expenditure Data

Position	Brief Job Description	FTE Salary	Estimated Salary
Postage	Considered the need to mail marketing and public relations brochures. Budget is based on \$3.00 per instructional segment.	\$12,000	
Office Security	Required to protect equipment, hardware, and other investments.	\$12,000	
Printing Advertising, Marketing & Public Relations	Required to attract students by using brochures and posters in schools. Contracted an outside vendor for to oversee public relations and marketing.	\$50,000	Initial budget of \$75,000

## Course Development and Maintenance

The second category of expenditures for the Georgia Virtual School is the area of Course Development. It was decided that it would be in the best interest of the GAVS if the GAVS developed its own courses. By developing its own courses, the GAVS could guarantee that courses would meet state standards as well as any local needs. Although the cost of developing its own courses would be great, the GAVS anticipates this initial cost paying for itself in the future. The GAVS has set a goal of developing five courses per year. Presently, the Georgia Virtual School has budgeted approximately \$296,562.50 for course development.

The GAVS has subdivided course development into three different subcategories: course development personnel, course development, and course maintenance and

updates. Although the Georgia Virtual School recognizes that different positions are needed in order to develop courses, the GAVS presently has budgeted a ½ time Course Development Coordinator. As the GAVS grows, it is anticipated that the Course Development Coordinator will become a full-time position earning a salary of 1.25 FTE or \$56,250 per year.

The Georgia Virtual School recognizes that the largest expense of developing courses is people. The GAVS sees course development as a team effort with several people involved in developing a course. In order to develop online courses, the GAVS needs a lead content writer, two to three web developers, a full-time technical person, an adjunct content person, and one teacher per course. The GAVS estimates the cost of course development to be \$60,000 per course, which is consistent with the GAVS' budget for course development. The GAVS has researched and considered the leasing or purchasing of content courses. It is estimated to cost \$40,000 per course to purchase courses from outside vendors, but the GAVS has decided to develop its own courses.

After courses are developed, periodic maintenance and updates of courses are required to keep the course current in content and new technological enhancements. The Georgia Virtual School has established a course review process to include the following:

1. Develop a course to remain aligned with specific state standards.
2. Have the course reviewed by internal personnel.
3. Have the course reviewed by external personnel.
4. Establish state or accrediting entity approval.
5. Publish the course.

The GAVS has not determined a set budget for course maintenance and updates, but \$10,000 per year has been suggested.

#### Technology Personnel

The third category of expenditures for the Georgia Virtual School is the area of Technology Personnel. This category is budgeted for the area of technological personnel required to operate and maintain the network system in which the GAVS functions. Presently, the Georgia Virtual School has budgeted approximately \$178,062.50 for Technology Personnel. The GAVS has budgeted three positions to manage and maintain the different systems in which the GAVS requires to operate including Network Manager at a budgeted salary of \$56,250; Learning Management Personnel at a budgeted salary of \$56,250; and Student Information System Personnel at a budgeted salary of \$67,500. Table 7 will give a brief job description, FTE salary, and estimated salary of technology personnel.

Table 7

#### Georgia Virtual School Technology Personnel Data

Position	Brief Job Description	FTE Salary	Estimated Salary
Network Manager	Oversees the computer network in which the GAVS operates. It is anticipated that as the school grows a more experienced and skilled person will be required at a higher pay of 1.5 FTE	1.25	\$56,250
Learning Management Personnel	Oversees the technology interface for instruction. Requires a person who understands teaching and learning as well as a way to incorporate technology into the learning and teaching process.	1.25	\$56,250

Table 7 (continued)

Georgia Virtual School Technology Personnel Data			
Position	Brief Job Description	FTE Salary	Estimated Salary
Student Information System Personnel	Manages the student information system. Requires a high level of technological skills.	1.5	\$67,500

The Georgia Virtual School has also designated approximately \$144,000 of the Personnel Technology budget for other costs such as technology support with a budget of \$48,000; website with a budget of \$24,000; technological consultation with a budget of \$50,000; security audit with a budget of \$10,000; personnel software with a budget of \$250 per person; and server software with a budget of \$12,000. Table 8 will give a brief description, budgeted cost, and any miscellaneous details about a category.

Table 8

Georgia Virtual School Technology Personnel Expenditure Data			
Category	Brief Description	Amount Budgeted	Miscellaneous Info
Tech Support	It is anticipated that tech support will become an outsourced contract.	\$4,000 per month \$48,000 per year	Anticipates an \$8,000 per month budget as school grows.
Website	It is anticipated that website management will be outsourced.	\$24,000	Could become an in-house position.

Table 8 (continued)

Georgia Virtual School Technology Personnel Expenditure Data			
Category	Brief Description	Amount Budgeted	Miscellaneous Info
Technological Consulting	This is used for software development and as-needed consulting such as development of Lotus Notes database and paperless application system.	\$50,000	Also could be used for upgrades to program resources.
Security Audit	Purpose is to ensure the security of the technology systems this includes creation of firewall, virus protection, disaster recovery plan, and security audit every 3 years.	\$10,000	
Personnel Software	Includes such software licenses as Microsoft Office as well as more complex software for high level technology employees.	\$250 per person	
Server Software	Includes processing software licenses for 4 network servers.	\$12,000	Anticipates 8 servers as the school grows.

### Technology Equipment

The fourth category of expenditures for the Georgia Virtual School is the area of Technology Equipment. Presently, the GAVS has budgeted approximately \$294,750 for a variety of technological equipment. The GAVS has established three different types of technology equipment including management equipment, network equipment, and faculty equipment. Table 9 will give a brief description and budgeted cost of each budgeted equipment category.

Table 9

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 Georgia Virtual School Technology Equipment Data
 

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Category	Brief Description	Amount Budgeted
Office Set-Up (Management)	Includes a desktop computer for clerical and laptop for other, printer, and phone.	\$4,000 per person
Home Office Set-Up (Management)	Laptop computer, printer, cell phone costs.	\$4,000 per person
Servers (Management)	Server dedicated to administrative and office functions are required.	\$15,000
Computer Replacement Costs (Management)	Computer replacement would be an on going cost per year.	\$1,000
Servers (Network)	Would require 3 servers to facilitate the Learning Management System, Student Information System, and web portal functions. It is recommended that network servers for email support and web server to students mastering web classes.	\$15,000 per server
Server Replacement (Network)	It is estimated that servers should be replaced every 4 years. An ongoing yearly budget would be put in place.	\$4,000 per year
Mirrored Site (Network)	Three additional servers placed at different sites should be put in place to ensure consistent technical functions by “mirroring the original servers in other locations.”	\$15,000 per server
Personnel Office Set-Up (Network)	Network personnel will receive a laptop computer, printer, and cell phone costs.	\$4,000 per person
Switches (Network)	One switch is required to support the network.	\$2,000
Connectivity – Bandwidth (Network)	Adequate connectivity that will support high internet use through a T1 line is required.	\$500 per month \$6,000 per year

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Table 9 (continued)

Georgia Virtual School Technology Equipment Data		
Category	Brief Description	Amount Budgeted
Full-Time Office Set-Up (Faculty)	Full-time teachers will receive a laptop computer, printer, and cell phone costs.	\$4,000 per person
Adjunct Office Set-Up (Faculty)	Adjunct teachers do not receive any type of computer set-up, but do receive stipends for phone expenses (\$35 per month) and connectivity expenses (\$45 per month).	\$80 per month per teacher \$1000 per month per teacher
Learning Management System (Network)	Supports instruction at a cost of \$25 per segment of instruction (4,000)	\$100,000

### Instruction

The fifth category of expenditures for the Georgia Virtual School is the area of Instruction. Presently, the GAVS has budgeted approximately \$1,376,180 for instruction. The GAVS has budgeted for the following instructional and instructional support positions: 1) Full-time teacher, who presently would entail 17 teachers teaching 120 students a semester and 120 Carnegie units a year; 2) Adjunct teachers are paid \$150 per segment and receive no benefits; 3) Counselors, who support school based counselors, are paid \$45,000 per year; 4) Substitutes are not required at this time, but as the school grows, one full-time substitute will be required; 5) Instructional Leaders, who supervise all teachers, are paid \$45,000 per year; 6) Content Specialists, who assists teachers in answering content questions and recommending class assignments, are paid \$200 per

month; and 7) State Level Facilitator, who helps with registration and is a liaison between local schools and the GAVS, is paid \$22,500 per year. Table 10 will give a brief description, FTE Salary, and budgeted cost about an instructional position.

Table 10

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 Georgia Virtual School Instructional Position Data
 

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Position	Brief Job Description	FTE Salary	Estimated Salary
Full-time Teacher	Will teach 120 Carnegie units with no more than 120 students per semester. As the GAVS grows, it is anticipated to need 45 Full-time teachers.	1.0	\$45,000
Adjunct Teacher	Part-time teachers who are paid per segment taught. Adjunct teachers do not receive any benefits. Presently, all GAVS teachers are adjunct to keep costs lower.	0.8	\$150 per segment
Counselor	Needed to support online learners. Also work with school based counselors to support students. Presently, have budgeted for one counselor but anticipate three positions as the school grows.	1.0	\$45,000
Substitute	Hired to ensure coverage while teachers are on break. Since all teachers are presently adjunct, substitute is not required at this time. The GAVS anticipates needing one substitute as the school grows.	1.0	\$45,000
Instructional Leader	Supervise teachers, completes teacher's performance appraisals, serves as department chairs, and interface with parents and teachers.	1.0	\$45,000

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Table 10 (*continued*)

Georgia Virtual School Instructional Position Data			
Position	Brief Job Description	FTE Salary	Estimated Salary
Content Specialist	Assists teachers with daily tasks, answering content questions, and recommend class assignments.	\$200 per month	\$2,400 per year
State Level Facilitator	Half time position. Is responsible for training local facilitators, assisting with registration, and acting as a liaison between local schools and the GAVS.	0.6	\$27,000
In-School Facilitator	GAVS encourages the local school district to provide a local school GAVS facilitator.		\$25 per segment is rebated to the school for the In-school facilitator.

The Georgia Virtual School has also budgeted for other costs within the category of Instruction. Some other costs include 1) professional development, which includes a teacher orientation course; 2) staff meeting/conference travel, which the GAVS believes is beneficial to convene teachers and staff throughout the year; 3) miscellaneous travel, which includes travel for state level facilitators, counselors, and exam proctors; 4) End of Course Testing, which includes exam proctor pay and Educational Technology Training Center lab rental; 5) supplemental services, which could include supplemental instructional services such as Advanced Placement Test Prep Courses, streaming video, voice boards, and loaner materials. Table 11 will give a brief description, amount budgeted, and any miscellaneous information about other costs pertaining to instruction.

Table 11

## Georgia Virtual School Supplemental Instructional Data

Category	Brief Description	Amount Budgeted	Miscellaneous Info
Professional Development	Includes teacher orientation course where teachers learn practices of online instruction, online learning, and technology involved, and teacher mentoring programs.	\$300 per full-time person	Considering hiring professional development teachers as the school grows.
Staff Meetings / Conference Travel	The GAVS believes that the school benefit from convening teachers and other staff throughout the year.	\$200 per day per person	Based in 5 days of travel.
Miscellaneous Travel	Includes travel for state level facilitators, exam proctors, counselors, and any others that meet with teachers and schools throughout the state.	\$25,000	Based on 2% of the total budget.
EOCT Testing	End of Course Tests will be administered at the 14 Educational Technology Training Center labs.	\$200 lab rental per day  \$75 per session per proctor	
Supplemental Services	Include services such as Advanced Placement Test Prep Courses, remediation modules, technology enhancements, and loaner materials.	\$70 per segment	Anticipates this cost to decline as the school grows.

### Expenditure Categories Compared by States

The researcher sought to determine how the Georgia Virtual School expenditure categories corresponded with expenditure categories from other states. Based on the literature found by the researcher, two other states, Colorado Cyberschools and Ohio's eCommunity schools, will be compared to the Georgia Virtual School. The Georgia Virtual School categorizes its expenditures in five categories; management, curriculum development, technology personnel, technology equipment, and instruction. The Colorado Cyberschools categorizes its expenditures into six categories; curriculum, instruction, internet, student support, school administration, and district administration. The Ohio's eCommunity schools categorize its expenditures into eleven categories: technology, instruction, administration, curriculum, educational management organization, student support, equipment and supplies, sponsorship, compliance and accountability, and other. An important consideration when comparing the GAVS' expenditures with the Colorado Cyberschool's and the Ohio eCommunity School's expenditures is that the GAVS is a state run school while the Colorado Cyberschool and Ohio eCommunity schools are charter schools run by other vendors and entities. This is an important consideration because some charter schools are for-profit while some charter schools are non-profit, but these differences do cause virtual schools to be structured differently.

The researcher has chosen to use the five categories of instruction, technology, curriculum, management, and student support which were common to the research in order to compare state expenditures among Colorado, Georgia, and Ohio. In the category of instruction, Colorado Cyberschools spent 36% of its budget on instruction; Georgia

Virtual School spends 48% of its budget on instruction; and Ohio eCommunity schools spent 22.9% of its budget on instruction. In the category of technology, Colorado Cyberschools spent 2% of its budget on technology; Georgia Virtual School spends 16% of its budget on technology; and Ohio eCommunity schools spent 27.6% of its budget on technology. In the category of curriculum, Colorado Cyberschools spent 35% of its budget on curriculum; Georgia Virtual School spends 10% of its budget on curriculum; and Ohio eCommunity schools spent 9.4% of its budget on curriculum. In the category of management, Colorado Cyberschools spent 18% of its budget on management; Georgia Virtual School spends 26% of its budget on curriculum; and Ohio eCommunity schools spent 27% of its budget on management. In the category of student support, Colorado Cyberschools spent 9% of its budget on student support, Georgia Virtual School spends 0% of its budget on student support; and Ohio eCommunity schools spent 7.7% of its budget on student support. According to the data provided by the Georgia Virtual School, positions such as counselors, content specialists, state level facilitators, and in-school facilitators which help provide support for students is included in the GAVS' instruction budget. If the amounts of Colorado's Cyberschools and Ohio's eCommunity schools for instruction and student support are combined, the percentages would be 45% and 30.6% respectively for instruction compared to the GAVS' 48% for instruction. Table 12 will give comparisons of state expenditures by percentages based on the five areas of expenditures.

Table 12

State Comparison of Expenditures

State Program	Instruction	Technology	Curriculum	Management	Student Support
Colorado Cyberschools	36%	2%	35%	18%	9%
Georgia Virtual School	48%	16%	10%	26%	0%
Ohio eCommunity schools	22.9%	27.6%	9.4%	27%	7.7%

Cost per FTE

The researcher sought to make comparisons of the Georgia Virtual School's cost per FTE with cost per FTE of other school districts in Georgia. The researcher was provided an estimated cost per FTE (\$4,357) by the GAVS, but the researcher was not given an FTE count. According to the Georgia Virtual School, the GAVS FTE count could be determined by taking the number of segments (4,000) and dividing the number of segments by 12 to get an FTE count (333).

The researcher analyzed FTE counts, cost per FTE, and an adjusted cost per FTE in all 180 school districts in Georgia. The researcher wanted to compare actual cost per FTE with the GAVS cost per FTE, but the researcher also wanted to compare cost per FTE on a more equitable basis. The researcher recalculated the Georgia school districts' cost per FTE by removing Transportation costs and Maintenance and Operations costs from each school district's cost per FTE since the Georgia Virtual School does not have any student transportation costs or student facility costs. Although the researcher used all

180 school districts in calculations, Table 13 shows just a sampling of school districts' FTE counts, total expenditures, cost per FTE, and an adjusted cost per FTE.

Table 13

Sampling of Georgia School Districts cost per FTE

School District	FTE Count	Total Expenditures	Cost per FTE	Adjusted Cost per FTE
Quitman County	250	\$3,758,339	\$15,033	\$13,410
Echols County	707	\$5,250,071	\$7,425	\$6,478
Clinch County	1,323	\$11,126,929	\$8,410	\$7,473
Pulaski County	1,559	\$12,461,890	\$7,993	\$7,137
Atkinson County	1,682	\$11,638,368	\$6,919	\$6,105
Crawford County	1,952	\$15,508,137	\$7,994	\$6,777
Decatur City	2,321	\$30,713,856	\$13,233	\$11,588
Banks County	2,634	\$18,892,804	\$7,172	\$6,218
Jefferson County	3,094	\$24,621,410	\$7,957	\$6,975
Dodge County	3,440	\$24,131,946	\$7,015	\$6,256
White County	3,771	\$32,831,464	\$8,706	\$7,719
Thomas County	5,418	\$40,491,107	\$7,473	\$6,547
Dalton City	6,259	\$51,875,263	\$8,288	\$7,265
Bulloch County	8,527	\$66,926,405	\$7,848	\$6,743
Clarke County	11,311	\$108,777,454	\$9,616	\$8,028
Coweta County	19,972	\$139,979,474	\$7,008	\$6,051
Chatham County	32,544	\$270,974,162	\$8,323	\$7,202
Gwinnett County	146,466	\$10,843,491,023	\$7,397	\$6,544

The researcher calculated descriptive statistics concerning the 180 Georgia school districts. The FTE counts for Georgia school districts produced a mean of 8,699.49 with a Standard Deviation of 17,581.094. The cost per FTE for Georgia school districts produced a mean of \$7,935.95 with a Standard Deviation of \$1,232.546. The adjusted cost per FTE for Georgia school districts produced a mean of \$6,960.42 with a Standard Deviation of \$1,069.830. The descriptive statistics for the 180 Georgia school districts were used to compare the cost per FTE between the Georgia Virtual School and Georgia school districts. Table 14 shows the descriptive statistics of the Georgia school district FTE counts, cost per FTE, and adjusted cost per FTE.

Table 14

Descriptive Statistics of Georgia School Districts

Statistic	N	Mean	Standard Deviation
FTE Count	180	8,699.49	17,581.094
Cost per FTE	180	\$7,953.95	\$1,232.546
Adjusted Cost per FTE	180	\$6,960.42	\$1,069.830

The researcher calculated descriptive statistics concerning the Georgia Virtual School and the descriptive statistical data calculated from the 180 Georgia school districts. The researcher used a GAVS FTE count of 333, cost per FTE of \$4,357, and adjusted cost per FTE of \$4,357. The researcher used a mean Georgia school district FTE count of 8699.49, cost per FTE of \$7,953, and adjusted cost per FTE of \$6,960. Table 15 illustrates the data used in the cost per FTE analysis.

Table 15

## Data Used for Cost per FTE Analysis

School District	FTE Count	Cost per FTE	Adjusted Cost per FTE
Georgia Virtual School	333	\$4,357	\$4,357
Georgia school districts Mean	8699.49	\$7,953	\$6,960

The researcher analyzed the Georgia Virtual School FTE count, cost per FTE, and adjusted cost per FTE with the Georgia school districts mean FTE count, cost per FTE, and adjusted cost per FTE. The calculated descriptive statistics found a mean FTE of 4,516.245 with a Standard Deviation of 5916; mean cost per FTE of \$6,155 with a Standard Deviation of \$2,542.76; and mean adjusted cost per FTE of \$5,658.50 with a Standard Deviation of \$1,840.599. Table 16 illustrates the descriptive statistics of data from the GAVS and the Georgia school districts' means.

Table 16

## Descriptive Statistics of GAVS &amp; Georgia School Districts Means

Statistic	N	Mean	Standard Deviation
FTE Count	2	4,516.245	5,916.00181
Cost per FTE	2	\$6,155.00	\$2,542.756
Adjusted Cost per FTE	2	\$5,658.50	\$1,840.599

The researcher calculated a paired sample t-test to determine any correlations and significant differences at a 95% confidence interval in three different comparisons comparing FTE counts and cost per FTE; FTE counts and adjusted cost per FTE; and cost per FTE and adjusted cost per FTE. The results showed a Correlation of 1.0 in all three paired samples, but only the comparison of cost per FTE and adjusted cost per FTE found any statistical difference among the paired samples. The researcher's findings are presented in Table 17.

Table 17

Paired Sample t-Test Data of All Georgia School Districts

Pair	Correlation	Standard Deviation	t	Sig. (2-tailed)
FTE Count & Cost per FTE	1.0	3,373.245	-0.687	0.617
FTE Count & Adjusted Cost per FTE	1.0	4,075.403	-0.396	0.760
Cost per FTE & Adjusted Cost per FTE	1.0	\$702.157	1.0	1.0

The researcher also examined the Georgia Virtual School FTE count, cost per FTE, and adjusted cost per FTE with smaller sized, average sized, and larger sized Georgia school districts mean FTE count, mean cost per FTE, and mean adjusted cost per FTE. Smaller sized school districts were categorized by falling in the lower third of Georgia school districts according to FTE count; average sized school districts were categorized by falling in the middle third of Georgia school districts according to FTE

count; and larger sized school districts were categorized by falling in the upper third of Georgia school districts according to FTE count. Smaller sized school districts had a mean FTE count of 1,415.03, mean cost per FTE of \$8,373, and a mean adjusted cost per FTE of \$7,322. Average sized school districts had a mean FTE count of 3,492, mean cost per FTE of \$7,801, and a mean adjusted cost per FTE of \$6,838. While larger sized school districts had a mean FTE of 21,192, mean cost per FTE of \$7,687, and a mean adjusted cost per FTE of \$6,720. Table 18 shows the descriptive statistics by Georgia school district size.

Table 18

Descriptive Statistics by Georgia School District Size

District Category	N	FTE Count	Cost per FTE	Adjusted Cost per FTE
Smaller Sized School Districts	60	1,415	\$8,373	\$7,322
Average Sized School Districts	60	3,492	\$7,801	\$6,838
Larger Sized School Districts	60	21,192	\$7,687	\$6,720

The researcher analyzed the Georgia Virtual School FTE count, cost per FTE, and adjusted cost per FTE with smaller sized Georgia school districts' mean FTE count, cost per FTE, and adjusted cost per FTE. The calculated descriptive statistics found a mean FTE of 874 with a Standard Deviation of 765.089; mean cost per FTE of \$6,365 with a Standard Deviation of \$2,839.741; and mean adjusted cost per FTE of \$5,839.50 with a

Standard Deviation of \$2,096.572. Table 19 illustrates the descriptive statistics of data from the GAVS and smaller Georgia school district means.

Table 19

Descriptive Statistics of GAVS & Smaller Sized Georgia School District Means

Statistic	N	Mean	Standard Deviation
FTE Count	2	874	765.089
Cost per FTE	2	\$6,365.00	\$2,839.741
Adjusted Cost per FTE	2	\$5,839.50	\$2,096.572

The researcher analyzed the Georgia Virtual School FTE count, cost per FTE, and adjusted cost per FTE with average sized Georgia school districts mean FTE count, cost per FTE, and adjusted cost per FTE. The calculated descriptive statistics found a mean FTE of 1,912.385 with a Standard Deviation of 2,233.588; mean cost per FTE of \$6,079.12 with a Standard Deviation of \$2,435.438; and mean adjusted cost per FTE of \$5,597.50 with a Standard Deviation of \$1,754.332. Table 20 illustrates the descriptive statistics of data from the GAVS and average sized Georgia school districts means.

Table 20

Descriptive Statistics of GAVS & Average Sized Georgia School Districts Means

Statistic	N	Mean	Standard Deviation
FTE Count	2	1,912.385	2,233.588
Cost per FTE	2	\$6,079.12	\$2,435.438
Adjusted Cost per FTE	2	\$5,597.50	\$1,754.332

The researcher analyzed the Georgia Virtual School FTE count, cost per FTE, and adjusted cost per FTE with larger sized Georgia school districts mean FTE count, cost per FTE, and adjusted cost per FTE. The calculated descriptive statistics found a mean FTE of 10,762.5 with a Standard Deviation of 14,749.540; mean cost per FTE of \$6,022 with a Standard Deviation of \$2,354.666; and mean adjusted cost per FTE of \$5,538.5 with a Standard Deviation of \$1,670.893. Table 21 illustrates the descriptive statistics of data from the GAVS and larger sized Georgia school districts means.

Table 21

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 Descriptive Statistics of GAVS & Larger Sized Georgia School Districts Means
 

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Statistic	N	Mean	Standard Deviation
FTE Count	2	10,762.5	14,749.540
Cost per FTE	2	\$6,022.00	\$2,354.666
Adjusted Cost per FTE	2	\$5,538.50	\$1,670.893

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The researcher calculated a paired sample t-test of smaller sized Georgia school districts to determine any correlations and significant differences at a 95% confidence interval in three different comparisons comparing FTE counts and cost per FTE; FTE counts and adjusted cost per FTE; and cost per FTE and adjusted cost per FTE. The results showed a Correlation of 1.0 in all three paired samples, but only the comparison of cost per FTE and adjusted cost per FTE found any statistical difference between the paired samples. The researcher's findings are presented in Table 22.

Table 22

## Paired Sample t-Test Data of Smaller Sized Georgia School Districts

Pair	Correlation	Standard Deviation	t	P
FTE Count & Cost per FTE	1.0	2,074.651	-3.743	0.166
FTE Count & Adjusted Cost per FTE	1.0	1,331.482	-5.274	0.119
Cost per FTE & Adjusted Cost per FTE	1.0	\$743.169	1.0	0.5

The researcher calculated a paired sample t-test of average sized Georgia school districts to determine any correlations and significant differences at a 95% confidence interval in three different comparisons comparing FTE counts and cost per FTE; FTE counts and adjusted cost per FTE; and cost per FTE and adjusted cost per FTE. The results showed a Correlation of 1.0 in all three paired samples, but only the comparison of cost per FTE and adjusted cost per FTE found any statistical difference among the paired samples. The researcher's findings are presented in Table 23.

Table 23

## Paired Sample t-Test Data of Average Sized Georgia School Districts

Pair	Correlation	Standard Deviation	t	p
FTE Count & Cost per FTE	1.0	201.851	-29.193	0.022
FTE Count & Adjusted Cost per FTE	1.0	479.256	-10.874	0.058

Table 23 (continued)

Paired Sample t-Test Data of Average Sized Georgia School Districts				
Pair	Correlation	Standard Deviation	t	p
Cost per FTE & Adjusted Cost per FTE	1.0	\$681.106	1.0	0.5

The researcher calculated a paired sample t-test of larger sized Georgia school districts to determine any correlations and significant differences at a 95% confidence interval in three different comparisons comparing FTE counts and cost per FTE; FTE counts and adjusted cost per FTE; and cost per FTE and adjusted cost per FTE. The results showed a Correlation of 1.0 in all three paired samples. The comparison of cost per FTE and adjusted cost per FTE found a statistical difference among the paired samples, while the paired sample of FTE count and cost per FTE and the paired sample of FTE count and adjusted cost per FTE found a slight statistical difference between the paired samples. The researcher's findings are presented in Table 24.

Table 24

Paired Sample t-Test Data of Larger Sized Georgia School Districts				
Pair	Correlation	Standard Deviation	t	p
FTE Count & Cost per FTE	1.0	12,394.875	0.541	0.684
FTE Count & Adjusted Cost per FTE	1.0	13,078.647	0.565	0.673

Table 24 (*continued*)

## Paired Sample t-Test Data of Larger Sized Georgia School Districts

Pair	Correlation	Standard Deviation	t	p
Cost per FTE & Adjusted Cost per FTE	1.0	\$683.772	1.0	0.5

## Summary

The researcher investigated the revenues and expenditures for the Georgia Virtual School, as well as comparisons of costs per FTE between the Georgia Virtual School and other school districts within the state of Georgia. Data was collected from information provided to the researcher from the Georgia Virtual School and data available on the Georgia Department of Education website that pertained to 1) Georgia Virtual School revenue sources; 2) Georgia Virtual School expenditures; 3) Georgia Virtual School expenditure categories; and 4) Georgia Virtual School and Georgia school districts' cost per FTE.

Specifically, the researcher received from the Georgia Virtual School data that indicated the revenue sources and amounts of revenue from each source; cost estimates for the 2007 GAVS budget that indicated different expenditure amounts and categories of expenditures; information about estimated costs by category from the Georgia Virtual School funding model; and 2006 expenditure data pertaining to all 180 school districts in the state of Georgia from the Georgia Department of Education website. Descriptive quantitative research procedures were used to analyze the areas of data. Descriptive statistics such as percentages, means, and standard deviations were described. In addition,

the researcher calculated pair sampled t-tests to determine if statistically significant differences existed among costs per FTE.

The first research question pertained to the funding sources of the Georgia Virtual School. Georgia Virtual School revenue data was analyzed by determining the percentage of each revenue source compared to the total GAVS appropriations (\$2,909,734). The researcher examined GAVS revenues with and without tuition that is still being collected for 2007. The amount of tuition collected, thus far, for 2007 is 4% of the GAVS' revenues compared to the 10% of the GAVS' revenues for 2006. The researcher determined that a majority of GAVS funding comes from Georgia state appropriations (76%), and that a small portion of the GAVS budget comes from student tuition (14%). The researcher also determined that the Georgia Virtual School does receive some funding from grants (6%), although this is not a substantial percentage of GAVS' revenues.

The second research question pertained to the expenditures of the Georgia Virtual School. Georgia Virtual School expenditure data was analyzed by determining the percentage of each expenditure category, and examining the different job descriptions, equipment, and money allocations budgeted for the expenditures. The researcher determined the Georgia Virtual School classifies expenditures into five different categories that include Management, Course Development and Maintenance, Technology Personnel, Technology Equipment, and Instruction. The Georgia Virtual School spends a majority of expenditures on instruction (48%) and management (26%), while the lowest expenditure is technology personnel (6%).

The third research question dealt with making comparisons between expenditure categories derived from the research literature and the expenditure categories of the Georgia Virtual School. The researcher derived five expenditure categories by reviewing research from Colorado Cyberschools and Ohio eCommunity schools which included Instruction, Technology, Curriculum, Management, and Student Support. The category of Student Support was the only category that did not compare to Colorado and Ohio. Georgia Virtual School does not have an expenditure category of Student Support, but according to the data, the Student Support category from Colorado and Ohio is present in the Georgia Virtual School Instruction expenditure category. By adding the Instruction and Student Support of Colorado Cyberschools (45%) and Ohio eCommunity schools (30.6%), the researcher found the results to be comparable to the GAVS' Instruction category (48%).

The fourth research question dealt with making comparisons of cost per FTE between the Georgia Virtual School and other Georgia school districts. The cost per FTE comparisons were analyzed by calculating descriptive statistical data such as means and standard deviations, and paired sample t-tests were used to determine any correlations and significant differences. The researcher used two costs per FTE in analyzing data. First, the actual cost per FTE of the Georgia Virtual School and the 180 Georgia school districts were used. Second, an adjusted cost per FTE was calculated for the 180 Georgia school districts by recalculating the cost per FTE without Transportation costs and Maintenance and Operations costs. The researcher also compared Georgia Virtual School costs per FTE with Georgia school district costs per FTE by categorizing school districts in a small, average, and large category. In all comparisons, only the comparison of costs

per FTE and adjusted costs per FTE resulted in any statistical difference between the paired samples. In all comparisons, the Georgia Virtual School had the lowest cost per FTE (\$4,357). An analysis and discussion of the research findings, as well as conclusions and implications of the findings, are presented in Chapter V.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Online education is quickly becoming an alternative method of education that helps school districts address student course flexibility, teacher shortages, and highly qualified teaching staff for courses. Over the past several years, research has been conducted to determine the effectiveness of online learning as compared to traditional learning, but very little research has been conducted regarding the financial aspect of online learning. In 2005, Georgia passed legislation creating the Georgia Virtual School. As a new online education program, the researcher had hoped to provide baseline data on revenues and expenditures of the Georgia Virtual School to provide information for persons involved in making decisions about the Georgia Virtual School; the researcher also had hoped to add to the body of research pertaining to online education funding.

#### Summary

The researcher's purpose was to study the Georgia Virtual School revenues and expenditures, compare expenditure categories of the Georgia Virtual School with expenditure categories from other states, and to compare Georgia Virtual School's cost per FTE with costs per FTE of other Georgia school districts. A descriptive research design was used to address the following research questions:

1. What are the funding revenues for the Georgia Virtual School?
2. What are the different areas or categories of expenditures in the Georgia Virtual School?
3. What is the relationship of the Georgia Virtual School expenditures according to the five expenditures areas used in other states?

4. What is the cost per FTE of the Georgia Virtual School, and how does it compare to the cost per FTE of other Georgia school districts?

The researcher analyzed data provided by the Georgia Virtual School and the Georgia Department of Education website. The researcher formally requested data related to revenues and expenditures from the Georgia Virtual School. After getting the proper approvals from GAVS administration and legal department, the researcher was provided some basic information and data connected with revenues and expenditures with instructions to limit the data disclosure to the researcher's doctoral steering committee. The director of the GAVS was very helpful in answering any follow up questions to clarify information pertaining to the data. The researcher also gathered data concerning 2006 expenditures for all 180 Georgia school districts from the Georgia Department of Education.

#### Analysis of Research Findings

The researcher determined that the Georgia Virtual School has total revenues of \$2,909,734 from six different areas with state appropriated revenues being the largest source of funding. It was determined that approximately ten percent of the GAVS' revenues come from student paid tuition. It was also determined that the GAVS has received grants from the BellSouth Foundation and the National Governor's Association that make up six percent of the GAVS' revenues.

The researcher determined that the Georgia Virtual School has classified expenditures into five different categories with instruction being the largest expenditure using forty-eight percent of the GAVS' budget and management being the second largest expenditure using twenty-six percent of the GAVS' budget. The GAVS has budgeted

funds to develop its own courses at a rate of five courses per year. The GAVS has developed a team concept in developing online courses using individuals who are specialist in content, web design, and technical procedures. The GAVS has also budgeted funds in the area of technology to keep the GAVS network continuously operating and secure by creating three different mirrored network server sites around the state.

The researcher determined that the Georgia Virtual School's expenditure categories are comparable with the expenditure categories from other state online programs. The category of Management was the most comparable of the expenditure categories among the states. The category of Instruction was also comparable among the states if the category of Student Support from Colorado and Ohio were considered an Instruction type of activity. Adding Student Support expenditures and Instruction expenditures from Colorado and Ohio made the Instruction expenditures category comparable with the GAVS.

The researcher determined that the cost per FTE for the Georgia Virtual School was \$4,357, which was lower than any other school district in the state of Georgia. The researcher calculated an adjusted cost per FTE for Georgia school districts, which removed the Transportation expenditures and Maintenance and Operations expenditures from school district's cost per FTE, which also showed a lower cost per FTE for the Georgia Virtual School compared to other Georgia school districts.

#### Discussion of Research Findings

The researcher gathered data from the Georgia Virtual School on revenues and expenditures pertaining to the GAVS. The results of this study will provide the Georgia Virtual School, the Georgia Department of Education, and state legislators, with data

pertaining to the origins of revenues, the categories of expenditures, and costs per FTE comparisons. This study will also add to the body of research concerning funding and costs of online education. The present discussion will be based on the research findings found in Chapter IV and the information presented in the review of literature found in Chapter II.

The first research question pertained to the revenues and sources of revenues for the Georgia Virtual School. The research showed that the Georgia Virtual School receives revenues from state appropriations, student tuition, and grants. This result corresponds with the findings of Watson (2005) and Watson and Ryan (2006) who determined the same revenue sources when analyzing online programs across the nation.

State legislation (2005) allows all students to take Georgia Virtual School courses for free with precedence being given to public school students. This does not include enrichment courses or credit recovery courses taken during summer semester of school. This policy would explain why the 2006 Tuition revenues are more than the 2007 Tuition revenues. It would be a safe assumption that the 2007 Tuition revenue category will increase upon the conclusion of summer semester registration.

The second research question addressed the categories of expenditures for the Georgia Virtual School. The research findings indicate that the Georgia Virtual School has developed a very comprehensive budget that includes detailed information about job positions and expenses needed by GAVS. The research showed how the GAVS budget is not only presented in amounts budgeted but also it has been valued within the FTE funding.

The third research question involved comparing the Georgia Virtual School expenditure categories with expenditure categories from other state online programs. The researcher was able to locate two studies from Colorado and Ohio that dealt directly with funding and costs for online education programs. The researcher identified five main expenditure categories that were classified by Adsit (2003) and Zajano and Ladd (2005). The one expenditure category the Georgia Virtual School did not share with the Colorado Cyberschools and Ohio eCommunity schools was Student Support. However, the researcher determined that the combined budget percentages of Student Support and Instruction for Colorado and Ohio were similar to the Instruction budget percentage of the GAVS. The information provided by the GAVS confirmed that many of the services and personnel considered Support Services in Colorado and Ohio are found in the Instruction category of the GAVS.

The researcher chose to compare the state expenditure categories using percentages because the budgets from Georgia (2007), Colorado (2003), and Ohio (2005) were not from the same year. The researcher used budget category percentages instead of dollar to dollar amounts in order to determine if the Georgia Virtual School expenditures were comparable with other states.

The fourth research question involved comparing the cost per FTE of the Georgia Virtual School with the costs per FTE of the other school districts in the state of Georgia. In an attempt to make an equitable comparison of costs per FTE, the researcher recalculated the 180 Georgia school districts cost per FTE by removing Transportation expenditures and Maintenance and Operations expenditures from the cost per FTE. The researcher also made costs per FTE comparisons by categorizing school districts into

either small sized school districts, average sized school districts, or large sized school districts. Originally, the researcher planned to compare per pupil costs throughout the state of Georgia but decided to use the cost per FTE in order to align with the terminology of the data that the researcher was gathering. The researcher found that the GAVS' cost per FTE was lower than any Georgia school district's cost per FTE regardless of the method of calculation.

### Conclusions

The researcher has concluded from the study that:

1. The Georgia Virtual School has revenues totaling \$2,909,734.
2. The Georgia Virtual School receives revenues from different sources including state appropriations, tuition, and grants.
3. The Georgia Virtual School has categorized expenditures in five different areas including Management, Course Development and Maintenance, Technology Personnel, Technology Equipment, and Instruction.
4. Instruction (48%) is the largest expenditure of the Georgia Virtual School.
5. Management makes up twenty-six percent of the Georgia Virtual School's budget.
6. The expenditures of the Georgia Virtual School are comparable to the expenditures of other states.
7. The cost per FTE of the Georgia Virtual School is lower than the cost per FTE of the 180 Georgia school districts.

## Implications

The researcher's purpose of this study was to provide baseline data on revenues and expenditures for the Georgia Virtual School. The researcher hopes the baseline data will be beneficial information for any persons who may not be familiar with the amounts and sources of revenues and categories of expenditures for the GAVS but who will be involved with decision making about the Georgia Virtual School. With the common perception that there is a lack of funding for many state online programs, the data gathered will help Georgia decision makers understand how much and from what sources the Georgia Virtual School receives revenues. This data could help in deciding whether the GAVS has adequate funding to be a successful means of providing an alternative education.

This research provided a comparison of Georgia Virtual School expenditures that are compared to expenditures from other state online programs. The data gathered will help compare the Georgia Virtual School's spending model to other spending models from other states. The data could be informative to the administration of the Georgia Virtual School to determine if the present funding model is the most appropriate and effective model for Georgia's online program.

This study also provided a comparison of Georgia Virtual School costs per FTE with costs per FTE of Georgia school districts. The data gathered will give decision makers information to determine if the Georgia Virtual School is an effective means of delivering an alternative education or alternative course options for Georgia students. This data would be beneficial for decision makers of the Georgia Virtual School, Georgia school districts, or Georgia legislators to support positively or negatively decisions made

about the Georgia Virtual School being able to deliver a quality alternative education at an efficient cost.

Lastly, this research study will add to the body of research that pertains to the topic of funding online programs. Adsit (2003) found very little research on the funding of K-12 online education programs when researching the costs for Colorado's cyberschools. This study will provide more data to be considered in future studies concerning funding in online education.

#### Recommendations

1. Further research should be conducted to determine the cost efficiency of the Georgia Virtual School.
2. Further research should be conducted to determine cost efficiency between the Georgia Virtual School and traditional Georgia school districts.
3. Further research should be conducted to determine the demographics of students who are paying tuition.
4. Further research should be conducted to compare online education costs of the Georgia Virtual School with costs from other states that have similar online programs.
5. Further research should be conducted to replicate this study on baseline revenues and expenditure for the Georgia Virtual School to determine any significant changes that may occur as the Georgia Virtual School continues to expand.

6. Georgia legislators should continue to monitor and appropriate funds that sufficiently allows all Georgia students to participate in the Georgia Virtual School.
7. Further research should be conducted on the effectiveness of Georgia Virtual School courses compared to their traditional school equivalents.

#### Dissemination

The researcher plans to share the results of this study with the Georgia Virtual School Director and Principal, Dr. Kristie Clements. The researcher will also share this study with other educators who have expressed an interest in seeing the results of this study upon its completion: Technology Education teachers, Administrators, and staff of the Georgia Virtual School. The researcher will attempt to get this study published in professional journals such as [The American Journal of Distance Education, Distance Education, E-Learning & Education, and Journal of Distance Education.] However, before this study can be published in a journal, the article must first be approved by the Georgia Virtual School and the Georgia Department of Education according to the stipulation given to the researcher in order to receive Georgia Virtual School financial data. A copy of the dissertation will be available at the Georgia Southern University Zach S. Henderson Library. The dissertation will also be accessible through the GALILEO Interconnected Library Universal Catalog in an electronic format.

#### Concluding Thoughts

The researcher has spent his entire career teaching Technology Education to high school and middle school students. The researcher strongly believes in the power of technology to add a sense of creativity to lessons that help to keep students engaged in

learning. Online education is an alternative method of education that has the potential to remove physical barriers and give students a level playing field. Over the past several years, online education has proven itself to be as effective as traditional education, but funding issues continue to be a concern for education decision makers. It is the researcher's desire that this study is the starting point in determining the cost efficiency of the Georgia Virtual School. Online education is an ever growing tool that can give students flexibility and options in taking hard to get classes and can give school districts the option to offer students specialty courses with "highly qualified" teachers.

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APPENDICES

## APPENDIX A

## INSTITUTIONAL REVIEW BOARD (IRB) EXEMPTION



ACADEMIC EXCELLENCE  
**GEORGIA  
SOUTHERN  
UNIVERSITY**

**JACK N. AVERITT COLLEGE OF GRADUATE STUDIES**

POST OFFICE BOX 8008  
STATESBORO, GA 30460-8008  
PHONE (912) 681-0578 • FAX (912) 681-0605  
E-MAIL [gradschool@gsvms2.cc.gasou.edu](mailto:gradschool@gsvms2.cc.gasou.edu)  
WEB [www2.gasou.edu/gradcoll/](http://www2.gasou.edu/gradcoll/)

December 1, 2006

James Kelly Sigman  
109 Burch Lane  
Brunswick, GA-31523

Dear Mr. Sigman,

After a review of your proposed research project numbered: **H07102**, and titled "**Georgia Virtual School: Baseline Data on Revenues and Expenditures**", it appears that your research involves activities that do not require approval by the Institutional Review Board according to federal guidelines.

According to the Code of Federal Regulations Title 45 Part 46, your research protocol is determined to be exempt under the following exemption category(s):

- Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

*Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that your research is exempt from IRB approval. You may proceed with the proposed research.*

Sincerely,

A handwritten signature in cursive script that reads "Julie B. Cole".

Julie B. Cole  
Director of Research Services and Sponsored Programs

## APPENDIX B

## REQUEST FOR DATA FROM THE GEORGIA VIRTUAL SCHOOL

**James (Kelly) Sigman**  
**Technology Education Instructor**

901 George Street  
Brunswick, GA 31520

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Phone (912) 267-4150 Ext 2112  
Fax (912) 267-4158  
Email: jksigman@glynn.k12.ga.us

January 22, 2007

Dr. Kristie Clements  
Principal / Program Manager  
Georgia Virtual School  
205 Jesse Hill Jr. Drive  
Atlanta, GA 30334

Dear Dr. Clements,

I am formally requesting data from the Georgia Virtual School or the Georgia Department of Education. I am working on a doctoral dissertation entitled: Georgia Virtual School: Baseline data on revenues and expenditures. This baseline data will help policy makers in the Georgia General Assembly and the Georgia Department of Education make decisions concerning appropriations for the Georgia Virtual School.

I am attempting to answer the following questions:

1. What are the funding revenues for the Georgia Virtual School?
2. What are the different areas or categories of expenditures in the Georgia Virtual School?
3. What is the per pupil costs of the Georgia Virtual School?
4. What is the relationship of the Georgia Virtual School expenditures according to the five expenditures areas used in other states?

I am hoping that either staff from the DOE or GVS will be able to provide me with required information from existing data bases. Because I am not aware of how such data is kept, I am hesitant to estimate on the time required to gather such financial data. It is my hope that this data is already being kept in some electronic format which, hopefully, will require a minimal amount of time to gather. I will be happy to do whatever I can to reduce the time required to get such data by DOE or GVS staff.

It is my desire that this study will be beneficial to the Georgia Virtual School or Georgia Department of Education as a means to provide data that shows the efficiency of the GVS in terms of per pupil costs compared to the other school districts in Georgia, and be able to provide information pertaining to future budgeting needs for the GVS. This study will be available for the use by the Georgia Virtual School and/or the Georgia Department of Education. It is not my intent to show cost efficiency of online learning, but this baseline data may prove to be useful in other research that want to determine online learning cost efficiency. At this point, my main goal is to publish this study for the benefit of the Georgia Virtual School, Georgia Department of Education, or the Georgia General Assembly. If further dissemination of the study is required by my degree program, I will submit an article of my findings and conclusions to the North American Council for Online Learning for publication.

Over the past several years, there has been an increase of research dealing with the effectiveness of online learning, but there is still a lack of research pertaining to the costs and funding of online education. Hopefully, this research will help add to the research of online funding with Georgia being a leader in that research.

I have received all the appropriate approvals from the appropriate committees at Georgia Southern University to continue with this study. I hope you will see the value of such a study and the possibilities this study will have in promoting online learning while allowing Georgia to be in the forefront of online funding issues.

Thank you for your consideration.

Kelly Sigman