

# The Impact Of Policy On Student Success In Secondary Online Education: A Case Study Of Florida Virtual School

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THE IMPACT OF POLICY ON STUDENT SUCCESS IN SECONDARY ONLINE  
EDUCATION: A CASE STUDY OF FLORIDA VIRTUAL SCHOOL

by  
RHONDA KAY MCPHERSON  
B.A. West Virginia University, 1999  
M.P.A. West Virginia University, 2001

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Doctoral Program in Public Affairs  
in the College of Health and Public Affairs  
at the University of Central Florida  
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Major Professor: Thomas Wan

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## **ABSTRACT**

Florida Virtual School (FLVS) was established in 1997 as an online education alternative for the residents of Florida. The purpose of this study was to identify policy changes at the organizational, state, and federal levels that had the propensity to impact student success (as measured by student's final letter grade) at FLVS. In addition, this study identified which type of institutional isomorphic policy (coercive, mimetic, or normative) best classified major policy changes in the organization from 1997-2007. The use of institutional theory as the guiding framework for this study proved to be beneficial and enabled the researcher to conclude which types of policy are the most effective in increasing student success in the secondary online education environment.

This study utilized ANOVA and regression analysis to detect whether or not changes in policy at the organizational and federal level have a statistically significant impact on student success in the secondary online education environment. This study reveals that student success at FLVS is consistently decreasing and that the change is statistically significant. Regression analysis found that the policy changes at FLVS in this study explain some of the variance detected in the change in the mean, or GPA, of the school. This study found that both coercive and mimetic policies have a statistically significant impact on student success in the secondary online education environment as identified in the isomorphic mechanisms outlined in institutional theory. This study is important to the field of literature regarding secondary online education in that it opens the discussion regarding types of policy and the potential impact that policy changes have on student success in the secondary online education environment. In addition, this study serves as a framework upon which future studies can be conducted and are recommended in this study.

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## **CHAPTER 1. INTRODUCTION**

### **Identification of the Study Problem**

As a publicly funded entity, Florida Virtual School (FLVS) is responsible for producing positive outcomes. In this setting, the measurable outcomes for FLVS are the final letter grades students receive. With the passage of the No Child Left Behind Act of 2001 (NCLBA of 2001), states became accountable to the federal government for producing outcomes that are constantly improving. The NCLBA of 2001 outlines very specific and measurable goals for student success. As a state-funded program, FLVS is also responsible for showing gains in student achievement as outlined in the NCLBA of 2001. Florida Virtual School has implemented six major policy changes from the 1998/1999-2006/2007 school years; the organizational policies were designed to increase student success at FLVS while federal and state policy dictated outcomes for the organization. To date, no research has been conducted at FLVS to identify whether the outcomes (final grades) are improving at FLVS. It is the intent of this study to determine whether outcomes are improving at FLVS and to answer the following questions:

- 1) Has student success, as measured by final letter grade, increased at FLVS from 1998-2007?
- 2) Do changes in policy play a role in increasing student success at FLVS?
- 3) Does the number of active policies in a given year play a role in increasing student success at FLVS?
- 4) Have the mandates and sanctions of the NCLBA of 2001 provided sufficient pressure on FLVS to implement policies that effectively increase student success?

- 5) Has the change in funding from a line-item allocation to performance-based reimbursement increased student success at FLVS?

### **Scope of the Research**

Florida Virtual School was created in 1997 as an option for residents of Florida to obtain academic credit in an online environment rather than through the traditional school. Throughout the past decade, FLVS has grown immensely, expanding its outreach to students on a national and international level. It is not the intent of the researcher to study the success of national and international students at FLVS at this point. This study will only analyze students that resided in the state of Florida at the time of their enrollment at FLVS. National and international students at FLVS are required to pay for enrollment of FLVS courses and are not relevant to this study.

It is unknown as to whether or not organizational policy changes are successfully improving student success as mandated by the NCLBA of 2001; therefore, this research will contribute to the literature of student success after the implementation of the NCLBA of 2001 in secondary online education. The NCLBA of 2001 mandates that students are successful and make sufficient learning gains per school year; this legislation will be discussed in further detail in the literature review. It is unknown as to whether or not the mandates of the NCLBA Act of 2001 have led to policy changes at FLVS that have increased student success overall.

It is not the intent of this study to analyze the target groups outlined in the NCLBA of 2001; rather, this study will look at student success overall at FLVS. This study will contribute to the vast literature on the effectiveness of the NCLBA of 2001 but will focus on the success of students in the online environment rather than the traditional school setting. In addition, this



study will analyze the effectiveness of organizational and federal policy changes throughout the existence of FLVS and their impact on improving student success in secondary online education.

### **Analytical Approach**

This study used SPSS software to administer Analysis of Variance (ANOVA) to determine the mean of student success from 1998-2007. In addition, regression analysis was conducted in order to determine the explanatory power of the independent variables in this study. The available data set covers nine academic years (June – May) and enabled the researcher to determine if the mean of student success increased, decreased, or was maintained throughout the study period. For the purpose of the study, student success is measured as the final letter grade issued in any FLVS course. Next, the researcher administered a survey to the faculty and staff of FLVS, identifying the types of policies that have been implemented and the perceived impact of these policies on student success.

### **Organization of the Chapters**

The literature review in this study can be found in Chapter 2. The literature includes a discussion about the emergence of online learning, a discussion regarding the impact of demographics on student success, the history of FLVS, and identification of the organizational and federal policies included in this study. Chapter 3 discusses the theories that were considered for this study and identifies the theory that was chosen as the framework for this study. In addition, the hypotheses for this study are introduced in Chapter 3. Chapter 4 identifies the methodology used in this study including a discussion about the study design, data source, sampling, identification of the variables and how they were operationalized, statistical

procedures and associated threats to internal validity, measurement, and analytic methods. The findings and hypothesis testing are discussed in Chapter 5. Conclusions and discussion of hypothesis testing is located in Chapter 6, followed by a discussion of the theoretical and practical contributions and limitations of this study, as well as the limitations and recommendations for future studies.

## **CHAPTER 2. LITERATURE REVIEW**

The literature review is designed to provide a better understanding of the background and context of the study problem. In this chapter, the following topics will be discussed: emergence of online learning as an alternative to traditional education; the influence of demographic characteristics on student success; the history of FLVS; identification of organizational policy changes and supporting literature; and a discussion of the No Child Left Behind Act of 2001 (NCLBA of 2001).

### **Emergence of Online Learning**

With today's adolescent generation spending more time playing video games, emailing, and surfing the internet than watching television, it is no wonder that the age of online learning has gone from the exception and has slowly emerged as an accepted alternative to the traditional classroom (Pape, 2005). Online learning is defined as a "formal education in which a majority of instruction occurs while teacher and learner are separate" (Blaylock & Newman, 2005 as cited in Clark, 2001, p.1) and has developed into a reliable mode of education in which integrity and adherence to education standards are expected. The demand for alternative forms of education has increased over the past decade. According to Ronsisvalle & Watkins (2005), increased enrollment in the school systems has led to a need for the development of virtual schools and online learning. Without the expense of overhead and infrastructure of traditional schools, and the emergence of the internet as widely accepted education tool, online learning seems to be an obvious choice for many states and school districts to "fill the gap" that exists in the current education system (Blackboard.com, (n.d.); Cavanaugh, Gillan, Kromrey, et.al, 2004; Ronsisvalle & Watkins, 2005, p. 117; Tucker, 2007; Vrasidas, Zembylas, & Chamberlain, 2003; Wood,

2005). Online learning can help offset the learning challenges for students that are ill, at risk of dropping out of high school, and even student athletes that spend a substantial amount of time traveling and competing (Blaylock & Newman, 2005; Roblyer, 2006; Ronsisvalle & Watkins, 2005; Tucker, 2007; Young, 2004). Blaylock & Newman (2005) note that online courses allow students to enroll in courses with highly qualified and certified teachers in specialized areas, preparing them for the rigorous demands of college and careers that may not be available to them in the traditional setting. The increased flexibility of online learning enables the students to have more freedom in regards to their personal lives, graduation dates, and work schedules (Roblyer, 2006; Young, 2004).

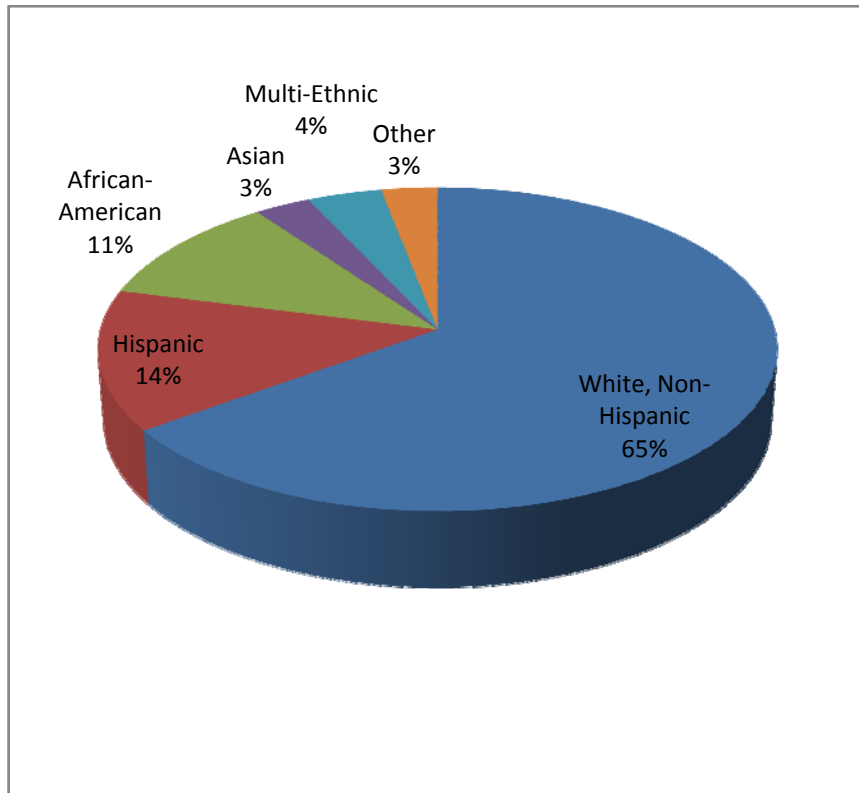
Online courses enable students that live in rural, poor, or underserved areas to have the opportunity to take specialized courses such as Advanced Placement, higher level math courses, or unique foreign languages (i.e.: Latin) which would otherwise be unavailable to them due to insufficient funding or demand in a given region (Cavanaugh, Gillan, Kromrey, et.al., 2004; Ronsisvalle & Watkins, 2005; Symonds, 2003; Young, 2004). Many rural school districts develop lab courses which include online courses as part of the traditional school day (Blaylock & Newman, 2005). For rural areas, online courses enable students to interact with peers with which they may never have the chance to meet otherwise, thereby increasing their exposure to diverse populations (Cobert, 2005; The North American Council for Online Learning..., 2006) and decreasing the feeling of isolation that many rural students hold (Belcastro, 2001). According to Smith, Clark, & Blomeyer (2005), enrollment in online courses in rural areas has become so popular that “rural high schools were twice as likely as urban high schools” to participate in some form of distance education (p.8).

## **Influence of Demographic Characteristics on Student Success**

### *Race*

“In 1967, Martin Luther King, Jr. wrote, ‘the job of the school is to teach so well that family background is no longer an issue;’” forty years later, “America’s schools fail to fulfill King’s mission” (Rouse & Barrow, 2006, p. 100). It is unsettling to discover that research findings in current literature regarding race and academic performance typically find that minority students have lower academic standing than non-minority students. According to Rouse, Brooks-Gunn, & McLanahan (2005), the NCLBA of 2001 has established required learning gains for minority groups in order to close “achievement gaps” that are currently present. Lopez (1999) found that students of Caucasian descent have higher GPA’s than students of non-Caucasian descent. De La Rosa (1998) found that minority students tend to have higher drop-out rates and notes that alternative education will be necessary to retain these students that have a propensity to drop out of school. An alternative form of education for these students is online learning, but according to Roblyer (1999), enrollment in online courses is more prevalent for Caucasian students than African American students in that Caucasian students are more likely to have computer and internet access at home and are more likely to access the computer on a weekly basis. According to the Florida TaxWatch (2007) report, the average rate of minority students enrolled in an online course is 10%; FLVS has a slightly higher than average representation of minority students enrolled its courses, yet minority students also tend to be withdrawn at a higher percentage than non-minority students. Refer to Table 1 for an enrollment summary of “Race” for the 2006-2007 school year.

Table 1. 2006-2007 FLVS Demographics by Race (FLVS, n.d., FLVS School Data)



It can be seen that there is an overrepresentation of Caucasian students enrolled in FLVS courses. At this point, rationale cannot be provided as to why this is the case at FLVS.

In an interesting study, Hill, Castellino, Lansford, Nowlin, Dodge, Bates, et.al., (2004) conducted a longitudinal study on the effect of demographics as they relate to behavior, achievement, and aspirations. Their findings indicate that regardless of socioeconomic status, African American and Caucasian students held similar beliefs regarding hurdles to obtaining academic achievement while Mexican Americans felt that there were fewer barriers to their academic achievement. Based on this study, it appears as though there is no major difference in the student's perception of their ability to achieve academic success; however, research indicates

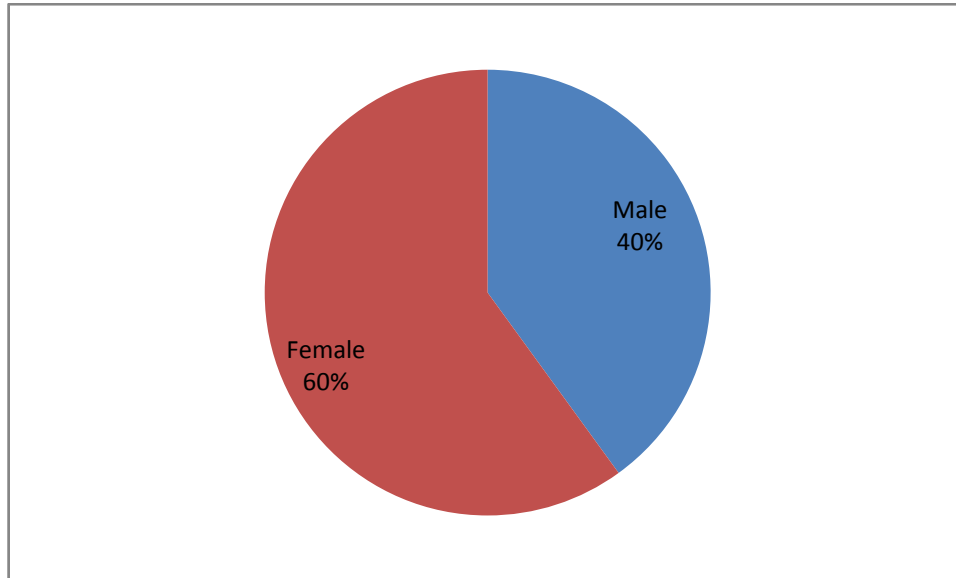
that minority students tend to have lower academic achievement than non-minority students.

Race will serve as a control variable in this study.

### *Gender*

The literature has changed over the past thirty years in regards to gender as it relates to academic performance. Tinto (1975) found that female students performed lower than male students and were more likely to drop out of school in higher education. It is assumed that political and societal changes over the past three decades have led to the changes in the academic performance of female students. For example, Houtte (2004) stated that females may achieve at a higher academic level more frequently than male students in that it is not construed as a negative characteristic for girls to be smart in contrast to boys who tend to be more distracted by appearance and peer pressure. Houtte (2004) also found that not only do females tend to spend more time studying, they also exhibit fewer behavior problems and skip class less often. Supporting Houtte's (2004) findings that females spend more time studying, Lopez (1999) found that female students tend to have higher GPA's than male students. Ray (2000) found that of home-schooled students, gender was statistically significant in predicting test scores in reading and mathematics. His study found that females tend to score higher in language while boys score higher in mathematics (Ray, 2000). Refer to Table 2 for an enrollment summary of "gender" for the 2006-2007 school year.

Table 2. 2006-2007 FLVS Enrollment by Gender (FLVS, n.d., FLVS School Data)



For the purpose of this study, gender will serve as a control variable.

### *Socioeconomic Status*

The literature is consistent regarding socioeconomic status as it relates to academic performance. In general, the pattern is students that come from families of low socioeconomic status do not perform as well academically as students of higher socioeconomic status (Rouse & Barrow, 2006). Rouse, Brooks-Gunn, & McLanahan (2005) state that children from families of low socioeconomic status are less “ready for school” and thereby do not perform as well academically (p.8). Hill, Castellino, Lansford, Nowlin, Dodge, Bates, et.al., (2004) found that students from families of a lower socioeconomic status were more likely to have lower academic scores and complete less years of education than persons of higher socioeconomic status. In



addition, they found that parents in low socioeconomic families had more barriers to being involved in their child's education, thereby, decreasing his or her ability to obtain high academic grades. At the school level, Crool (2002) found that schools with a high percentage of low socioeconomic students generally have low academic achievement overall. In terms of behavioral problems, Crool (2002) found that students of low socioeconomic status are ten times more likely to act out in an inappropriate manner.

It was the intent of the researcher to include socioeconomic status as a control variable in this study; however, the data provided by FLVS did not include data for receipt of free/reduced lunch as anticipated. In future studies, socioeconomic status should be included as a control variable.

### *Parental Involvement*

It is logical to conclude that parental involvement in their child's education will result in increased academic performance, and the literature supports this notion. Interestingly, the literature also suggests that parental involvement varies in type and expectation across socioeconomic and ethnic lines. In the past, the belief existed that parent involvement in primary education had more of an impact on student achievement than in secondary education; however, Hill, Castellino, Lansford, Nowlin, Dodge, Bates, et.al., (2004) found that parent involvement in their child's education at the secondary level does have a positive impact and should be fostered. Desimone (1999) found that parents with authoritative parenting styles, involvement in school functions, regular communication with teachers, a role in the decision-making of school policies, and participation in their child's homework result in increased academic achievement.

In her review of the literature, Desimone (1999) found that several authors note differences amongst certain races and socioeconomic status regarding cultural expectations of parent involvement. For example, she noted that minority parents of low socioeconomic status have different views on the proper role of involvement in their child's education stating that the former group is less involved in their child's education than parents of higher socioeconomic status and a non-minority. Hill, Castellino, Lansford, Nowlin, Dodge, Bates, et.al., (2004) found that parental involvement had more of an impact on African American students than it did for Caucasian students. Desimone (1999) noted that students of low socioeconomic status benefit more from parent involvement than other students yet the support is often lacking due to the parent's unfounded feelings of inadequacy and ineffectiveness.

Overall, Desimone (1999) found that the most significant type of parent involvement, regardless of race or socioeconomic status, is the student's perception of how involved his or her parents are in their education. Providing a different viewpoint, Jacobs & Harvey (2005) and Fan & Chen (2001) both found that the parent's expectation of their child's academic performance had the most impact on student achievement. Gonzalez-Pienda, Nunez, Gonzalez-Pumariega, Alvarez, Roces, & Garcia (2002) note that parental involvement is most effective in developing their child's self-esteem and self-worth, thereby enabling their children to succeed rather than forcing them to do so.

Requiring parental involvement appears to be a problem which cannot be solved by policies and procedures; however, according to Desimone (1999), schools can help in creating an environment which fosters parental involvement and responsibility. As mentioned earlier, FLVS

requires monthly student and guardian phone contact, thereby confirming Desimone's assertion that schools can involve parents in their child's education more regularly. For the purpose of this study, parental involvement as it relates to student success will be measured through the implementation of monthly phone calls at FLVS.

### *Academic History*

It is reasonable to assume that students with a high GPA will maintain their academic standing and successfully complete courses in which they are enrolled at FLVS. Morris, Wu, & Finnegan (2005) as cited in Diaz (2002), found that successful online students at the higher education level had a higher GPA than students that were not successful in online classes. Tinto (1975) found that student success in higher education can be predicted, in part, by high school GPA. Munro (1981) conducted a path analysis on Tinto's Model of Dropout in Higher Education and found that GPA was the most important predictor in student success. For the purpose of this study, GPA will serve as a control variable that will serve as a predictor of performance in FLVS coursework.

### **History of FLVS**

Florida Virtual School began in 1997 as a small grant project that was a collaboration of two school districts in Florida. Florida Virtual School credits are accepted in all of Florida's 67 counties and can serve as credits towards graduation, grade forgiveness, and/or early graduation (Trotter, 2001). Florida Virtual School is a viable entity and is accredited through two agencies: The Commission on International and Trans-Regional Accreditation and The Southern Association of Colleges and Schools (SACS) (FLVS, n.d., Accreditation and History). Florida

Virtual School has won several prestigious awards including, but not limited to, the following (FLVS, n.d., FLVS Awards):

1. SouthEast Initiatives Regional Technology in Education Consortium
2. The Canadian Association for Distance Education Award of Excellence
3. Year 2000 Distance Learning Award by the United States Distance Learning Association (USDLA)
4. Year 2002 Distance Learning Award by the United States Distance Learning Association (USDLA)
5. 2004 EdNET HERO Awards
6. 2004 Excellence in IT Leadership for Central Florida
7. 2005 - USDLA 21st Century Best Practices Award
8. EdNet's Impact Award
9. 2007 EdNet Pioneer Award
10. 2007 – USDLA 21st Century Awards Best Practices in Distance Learning
11. 2007 – Speak Up 100 School

As can be seen, FLVS is respected and rewarded in its field and, at a minimum, has earned the respect of many people in the state of Florida and beyond.

The guiding principle of FLVS has always been that the student is at the center of every decision made at FLVS. The President and CEO of FLVS, Julie Young, is very student-centered and empowers her employees to do what is in the best interest of the students at all times. As a teacher, Julie Young envisioned FLVS as a means to break the mold and empower students to

take ownership of their education and to be proud of their accomplishments. The passion and love with which Julie Young created FLVS is what makes this school unique amongst other online high schools (Independent School, 2001).

With only 77 enrollments in 1997, the future of FLVS was uncertain, leaving many onlookers skeptical of the concept of online learning (Florida Virtual School <FLVS>, n.d., Accreditation and History). Being the first online public high school proved to be a challenge as skeptics doubted the success and integrity of the program. Florida Virtual School began to grow and increased the number of course offerings from 5 in 1997 to 16 for the 1998-1999 school year (Florida TaxWatch, 2007). For the 1999-2000 school year, the number of course offerings more than doubled (36 courses) and FLVS began to root itself in the state of Florida. As FLVS continued to prove its value to the educational system of Florida, the Florida State Legislature granted FLVS the status of an “independent educational entity” in 2000 (FLVS, n.d., FLVS Facts). That same year, the legislature also created a board of trustees that would negotiate necessary administrative duties for the successful execution of an online school<sup>1</sup> (Florida TaxWatch, 2007). In 2001, FLVS adopted its mission statement: “Our commitment is to deliver a high-quality, technology based education that provides the skills and knowledge students need for success in the 21<sup>st</sup> century” (FLVS, n.d., What we Provide for Students). Although FLVS is not a diploma-granting institution, it does provide an alternative format for completing required and elective courses for graduation.

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<sup>1</sup> Necessary administrative duties can include: “...rules, policies, and procedures; enter into agreements with distance learning providers; and acquire, enjoy, use, and dispose of patents, trademarks, copyrights, licenses, rights and interests” (Florida TaxWatch, 2007, p. 28).

There are several steps involved in activating a student into an FLVS course. In order to become an active student in a FLVS course, the student and guardian are required to complete a Welcome Call<sup>2</sup> with the teacher of record prior to activation in the class (Roblyer, 2006). The Welcome Call is designed to familiarize the teacher with the student, guardian, and any specific needs that the student may have in order to be successful in the course. In addition, the 28 day grace period and withdrawn/failing policy is reviewed and the student and guardian are reminded that the student will be withdrawn with no grade if sufficient work is not completed within the first 28 days or withdrawn with a failing grade after the 28 day grace period (FLVS, n.d., How does an online course work? Do I work at my own pace?). Students are reminded (rather than informed) of the withdrawal process during the Welcome Call because the student and guardian are required to acknowledge that they agree to and understand the withdrawal policy before they can register for a course (FLVS, n.d., Withdrawal Process). Once activated into the course, the teacher of record must maintain and document regular phone and email communication with the student and guardian through the Virtual School Administrator (VSA)<sup>3</sup>. In Table 3, it can be seen that the trend at FLVS is continued growth and expansion.

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<sup>2</sup> View the Welcome Call Video for students and guardians at: <http://breeze.flvs.net:9090/p26737830/>

<sup>3</sup> According to David Bass, Director of Information Systems and Support at FLVS (personal communication, August 25, 2007), VSA was implemented in 2005 and is a data collection and contact log system used to create a “completely paperless course approval and grade distribution system...(and) a centralized system for managing multiple virtual schools under a single application.”

Table 3. Total Number of Enrollments at FLVS (Florida TaxWatch 2007, p. 9)

Year	Enrollment Baseline	Enrollment Year End	% Growth
1997	-	77	Baseline Year
1998	77	225	192%
1999	225	1,100	389%
2000	1,100	3,900	255%
2001	3,900	8,900	128%
2002	8,900	11,500	29%
2003	11,500	14,000	22%
2004	14,000	31,000	121%
2005	31,000	48,000	55%
2006	48,000	68,000	42%
2007	68,000	113,900	68%

It is evident that a substantial amount of time and effort is taken to activate students into FLVS courses. In that FLVS is paid only when students successfully complete a course, it is imperative for students that start a course with FLVS complete the course. In an attempt to increase retention and revenue at FLVS, the organization has implemented a few key policies at that are designed to promote student success.

### **Organizational Policy: Identification and Supporting Literature**

Policy changes at the organizational level that will be analyzed in this study are as follows: 1) 28-day grace period<sup>4</sup>; 2) pace chart<sup>5</sup>; 3) monthly phone calls<sup>6</sup>; 4) the shift in state

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<sup>4</sup> The 28-day grace period is the first 28 days in which a student is enrolled in a FLVS course. Students can voluntarily withdraw from the class or the teacher can remove the student from the course for lack of assignment completion without penalty (FLVS, n.d, Withdrawal Process).

<sup>5</sup> The pace chart outlines the required amount of assignments per week.

<sup>6</sup> The literature suggests that more parent involvement in the student's education results in increased success; Although monthly phone calls have been required since its inception in 1997 they did not become a policy until the 2001/2002 school year; therefore, it can be logically concluded that enforcing the policy will result in increased communication and involvement with the student and guardian, thereby increasing student success (P. Bitrolo,

funding from a line-item allocation to a full-time equivalent (FTE) model; 5) discussion group postings<sup>7</sup>; and 6) oral assessments<sup>8</sup>. Please refer to Table 4 for an overview and academic year of implementation of the organizational policy changes that will be discussed in this study. Please note that this table includes policy changes to the organization only; the NCLBA of 2001 will be discussed later and was implemented in the 2002-2003 school year.

Table 4. Overview of Organizational Policy Changes Included in This Study

Academic Year	Policy Change
1998-1999	28-day grace period
1999-2000	Pace Chart
2001-2002	Monthly Phone Calls
2003-2004	Funding
2004-2005	Discussion Group Postings
2005-2006	Oral Assessments

Next, the aforementioned policies will be described, supporting literature will be discussed, and the policies will be categorized into one of the components of Kearsley’s Theory of Engagement (2000).

### *Kearsley’s Theory of Engagement*

Communication between student to student, student to teacher, and teacher to guardian is imperative in having a successful online learning environment (Smith, Clark, & Blomeyer,

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personal communication; Roblyer, 2006; Starkman, 2007; Hill, Castellino, Lansford, Nowlin, Dodge, Bates, et.al., 2004; Desimone, 1999; Jacobs & Harvey, 2005; Fan & Chen, 2001; Gonzalez-Pienda, Nunez, Gonzalez-Pumareiga, Alvarez, Roces, & Garcia, 2002).

<sup>7</sup> The implementation of discussion group assignments, the literature indicates that student-to-student and student-to-teacher interaction in online courses improves student performance (Kearsley, 2000; Ronsisvalle & Watkins, 2005; Droste & Droste, 2004; Thomas, 2002; P Bitrolo, personal communication).

<sup>8</sup> Oral Assessments are quizzes taken over the phone with the student and the teacher of record.



2005). Additionally, policies that require compliance should be effective in increasing student success due to the inevitable negative consequences of non-compliance. Kearsley's (2000) Theory of Engagement embodies this notion and states that students are successful in online courses when they are able to interact with their peers, have project-based assignments, and have an external force driving them to complete the course. The three components to his theory are as follows: Relate, Create, and Donate. For the purpose of this study, the Relate component of Kearsley's theory is satisfied in FLVS courses through the completion monthly phone calls, discussion postings, and oral assessments (Florida TaxWatch, 2007; Tucker, 2007). The 28-day grace period, the pace chart, the NCLBA of 2001, and the change in funding from a line-item to FTE model fit under Kearsley's Donate component of his theory. Florida Virtual School has not implemented policies that meet the requirements of the Create component of Kearsley's theory; however, it should be noted that the courses are designed to have project based assessments. The Create component of Kearsley's theory will not be analyzed in this study as there are no policies on which to base an analysis.

#### *28-day Grace Period: 1998/1999 – present*

The 28-day grace period was implemented at the start of the 1998-1999 school year and has remained in effect since that time (P. Bitrolo, personal communication, August 25, 2007). It is expected that the implementation of the 28-day grace period will increase student success overall in that students that do not perform well or feel that they will not perform well in the course can withdraw from the course without penalty during this time period (Roblyer, 2006; P. Bitrolo, personal communication; Trotter, 2001; Roblyer, 1999; FLVS, n.d, Withdrawal Process). According to Roblyer (2006), drop-out rates in online courses in higher education can

be as high as 60-70%. Roblyer (2006) noted that not all virtual programs have such high drop-out rates because they have programs like the 28-day grace period at FLVS which enable students to drop the course without penalty if they decide that online learning is not their best learning environment. In addition, instructors can drop students from the course during the 28-day grace period if they do not complete the required amount of assignments during the first four weeks of the course (FLVS, n.d., Withdrawal Process). Trotter (2001) indicated that FLVS officials noted a substantial 25% attrition rate during the grace period, which is 50% more than the dropout rate for college courses. Instructors of online courses note that typically, students that drop out of online courses do not even begin the coursework; therefore, dropping the class is the best decision for the student at that time (Roblyer, 1999). At FLVS, students that do not successfully complete the required amount of work during the grace period can be withdrawn from the class; therefore, the 28-day grace period fits under the Donate category of Kearsley's Theory of Engagement (2000).

*Pace Chart: 1999/2000 – present*

Florida Virtual School's motto, "Any Time, Any Place, Any Path, Any Pace" implies that students can go as fast, or slow, as they would like without repercussion. Initially, FLVS did not require a specific amount of work from the students, leaving the students to complete the course at-will; however, slow completion rates resulted in the implementation of 16-week pace charts for the 1999-2000 school year (P. Bitrolo<sup>9</sup>, personal communication, August 25, 2007) which outlined weekly assignments for the students to follow in order to complete their courses in a more timely manner (Blaylock & Newman, 2005; The North American Council for Online

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<sup>9</sup> Pam Bitrolo is the Chief Learning Officer at Florida Virtual School.

Learning..., 2006; Tucker, 2007). Subsequently, policies regarding weekly submissions emerged, holding students accountable for communication with their teacher if an unforeseen circumstance were to prohibit them from working in the course for an extended period of time (FLVS, n.d., Withdrawal Process). Students that do not turn in the required amount of work per week are subject to withdrawal and can receive a failing grade in the course. In a purely financial sense, every day that an inactive student remains in a FLVS course, the potential revenue loss increases. It is incumbent upon the teachers to carefully monitor student progress so as to minimize revenue loss for the inevitable withdrawals that will occur. This policy falls under the Donate component of Kearsley's Theory of Engagement (2000) in that students must complete the required work or be withdrawn from the class.

*Monthly Phone Calls: 2001/2002 – present*

In an attempt to decrease attrition rates, FLVS implemented monthly phone calls to obtain higher levels of student and guardian involvement, thereby effectively increasing student success. It is assumed that informing the students and guardians that they are behind pace will result in changed behavior, thereby retaining the student and creating a positive output. Florida Virtual School currently requires student, teacher, and guardian telephone contact on a monthly basis. In 2001, monthly phone communication with the student and guardian became mandatory (P. Bitrolo, personal communication, August 27, 2007). At present, compliance with this policy is monitored closely through the Virtual School Administrator (VSA) where all communications with students, parents, and Guidance Counselors are logged (Roblyer, 2006; Starkman, 2007).

Monthly phone communication with the student and guardian is imperative, and often, students are more comfortable communicating with teachers in the online environment because of the anonymity available to the student; the student will not feel judged or uncomfortable about physical or physiological impairments when neither the teacher nor the student's peers can see him or her (Hassel & Terrell, n.d.). Requiring parental involvement in a student's education may seem difficult; however, according to Desimone (1999), schools can help in creating an environment which fosters parental involvement and responsibility. Florida Virtual School requires monthly student and guardian phone contact, thereby confirming Desimone's assertion that schools can involve parents in their child's education more regularly. According to Tucker (2007), three-fifths of the guardians at FLVS have taken advantage of the guardian accounts<sup>10</sup> that are available to easily monitor their child's progress in FLVS courses. The North American Council for Online Learning and the Partnership for 21<sup>st</sup> Century Skills (2006) state that parents appreciate the ability "view grades, completed or incompleting assignments, teacher feedback, and updates on announcements from teachers" in the online environment as it enables them to have greater involvement in their child's education (p. 4). Blackboard.com (n.d.) interviewed parents of students enrolled in online courses and found that they highly value the ability to monitor their son or daughter's progression in the class. In addition, Collins (n.d.) notes that parents can view progress reports and receive support for their children with greater ease in the online environment.

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<sup>10</sup> To view how to set up a guardian account with FLVS, go to [http://www.flvs.net/students\\_parents/access\\_to\\_student\\_info.php](http://www.flvs.net/students_parents/access_to_student_info.php) (FLVS., n.d., Access to Student Information).

It is logical to conclude that parental involvement in their child's education will result in increased academic performance, and the literature supports this notion. In the past, the belief existed that parental involvement in primary education had more of an impact on student achievement than in secondary education; however, Hill, Castellino, Lansford, Nowlin, Dodge, Bates, et.al., (2004) found that parental involvement in their child's education at the secondary level does have a positive impact and should be fostered. Desimone (1999) found that parents with authoritative parenting styles, involvement in school functions, regular communication with teachers, a role in the decision-making of school policies, and participation in their child's homework result in increased academic achievement.

In her review of the literature, Desimone (1999) found that several authors note differences amongst certain races and socioeconomic status regarding cultural expectations of parent involvement. For example, she noted that minority parents of low socioeconomic status have different views on the proper role of involvement in their child's education stating that the former group is less involved in their child's education than parents of higher socioeconomic status and a non-minority. Hill, Castellino, Lansford, Nowlin, Dodge, Bates, et.al., (2004) found that parental involvement had more of an impact on African American students than it did for Caucasian students. Desimone (1999) noted that students of low socioeconomic status benefit more from parent involvement than other students yet the support is often lacking due to the parent's unfounded feelings of inadequacy and ineffectiveness. Overall, Desimone (1999) found that the most significant type of parent involvement, regardless of race or socioeconomic status, is the student's perception of how involved his or her parents are in their education.

Providing a different viewpoint, Jacobs & Harvey (2005) and Fan & Chen (2001) both found that the parents' expectation of their child's academic performance had the most impact on student achievement. Gonzalez-Pienda, Nunez, Gonzalez-Pumariega, Alvarez, Roces, & Garcia (2002) note that parental involvement is most effective in developing their child's self-esteem and self-worth, thereby enabling their children to succeed rather than forcing them to do so. In that FLVS requires communication between the teacher, guardian, and student, it is expected that student success will increase after this policy was implemented at FLVS. Monthly phone contact with the student and guardian should increase student success as identified in Kearsley's Theory of Engagement (2000) within the Relate category.

*Discussion Group Postings: 2004/2005 – present*

According to Ronsisvalle & Watkins (2005), interaction with the teacher and other students on an ongoing basis is imperative to establishing a learning community that promotes success and security. Several researchers have noted that students are more likely to participate in discussions in the online environment because of the anonymity associated with the forum; students are not shy, embarrassed, or ridiculed for how they look, dress, or talk (Blackboard.com, n.d.; Droste & Droste, 2004; Hassel & Terrell, n.d.). Students are able to express themselves freely, while still respecting the opinions of their peers. In addition, Droste & Droste (2004) note that written communication is a form of attendance in the online environment and shows responsibility and accountability on behalf of the student. Finally, Thomas (2002) found that although discussion assignments do engage students to the point of turning in their required assignments, typical discussion assignments are not sufficient for creating a conversation as would take place in a face-to-face class. Florida Virtual School implemented required discussion

groups in all of their courses in the 2004-2005 school year (P. Bitrolo, personal communication, August 27, 2007). Discussion group postings should increase student success as identified in Kearsley's Theory of Engagement (2000) within the Relate category.

*Funding: 2003/2004 – present*

Florida Virtual School is funded primarily through the state legislature through the FTE payment schedule; it is imperative that students remain in and successfully complete<sup>11</sup> the courses in which they are enrolled (Borja, R., 2005; Roblyer, 2006). Florida Virtual School also has a tuition-based program in the Global Services department which serves national and international students; however, national and international students are beyond the scope of this study and are not relevant to the revenue source for Florida residents (FLVS, n.d., About Us). From the 1997/1998 – 2002/2003 academic years, FLVS was funded as a line-item allocation in the state's budget. Currently, the budget allocation reflects the payment structure of other districts; FLVS is compensated for students that complete the course (\$6328 per FTE, which is 12 half credit completions, or \$527 per half credit completion as noted in Tucker, 2007) and are no longer paid for students that withdraw from or fail a class (Hendrie, C. & Trotter, A., 2003). The change from a line-item allocation to a FTE payment structure took place in the 2003-2004 school year and has remained constant to date (J. Young<sup>12</sup>, personal communication, August 17, 2007). Table 5 provides an overview of the percent increase in the total budget for FLVS for 10 consecutive school years.

Table 5. Total Budget, FLVS, 1997 – 2007 (Florida TaxWatch 2007, p. 29)

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<sup>11</sup> Successful completion of an FLVS course is measured as receiving a final letter grade of A, B, C, or D. Failing grades are not paid by the state of Florida.

<sup>12</sup> Julie Young is the President and CEO of Florida Virtual School.

Academic Year	Total Budget	Amount Increase	% Increase
1997-1998	\$ 1,300,000.00	Baseline	Baseline
1998-1999	\$ 4,360,000.00	\$ 3,060,000.00	70%
1999-2000	\$ 3,800,000.00	\$ (560,000.00)	-15%
2000-2001	\$ 6,170,000.00	\$ 2,370,000.00	38%
2001-2002	\$ 6,170,000.00	\$ -	0%
2002-2003	\$ 6,900,000.00	\$ 730,000.00	11%
2003-2004	\$ 8,572,428.00	\$ 1,672,428.00	20%
2004-2005	\$ 14,493,007.00	\$ 5,920,579.00	41%
2005-2006	\$ 22,980,352.00	\$ 8,487,345.00	37%
2006-2007	\$ 37,279,347.00	\$ 14,298,995.00	38%

Enrollment of students at FLVS has many levels and has been directly tied to funding since the 2003/2004 school year. There are several classifications of enrollment at FLVS: 1) Complete (student successfully completed the course with a passing grade – with the FTE funding model, this is the only enrollment status that warrants payment); 2) complete/failing (student completed more than 50% of the course but either stopped working in the course or earned a failing grade); 3) withdrawn/failing (student stopped working after the 28 day grace period<sup>13</sup>, but before he/she completed 50% of the course); 4) withdrawn/no grade (student did not complete the required amount of work within the first 28 days in which the student was activated in the course); 5) never activated (student did not respond to phone or email

<sup>13</sup> The 28 day grace period is the first 28 days in which the student is active in a given course; during that time period, he or she can voluntarily withdraw from the course without penalty, and the teacher can withdraw the student from the course if he or she has not completed the minimum amount of work on the pace chart.



communication requesting completion of the Welcome Call); and 6) never assigned (student withdrew his or her enrollment in a course before he/she was assigned a teacher). The Florida TaxWatch (2007) report briefly addresses withdrawals from FLVS courses and found that the ratio of withdrawals decreased from the 2004-2005 to 2005-2006 school year, yet remained at a high rate of 26.9%. It is positive that the ratio of withdrawn enrollments has decreased; it is expected that the requirement that students succeed to receive funding will continue to increase student success. This policy falls under Kearsley's Donate component of his theory in that failure to produce student success will result in decreased funding.

*Oral Assessments: 2005/2006 – present*

Oral Assessments are quizzes that are conducted over the phone with the student and the teacher. This component of FLVS courses serves as an opportunity for the teacher and student to interact as well as give the teacher an opportunity to determine student mastery of the content. It is expected that the student and the teacher will be able to build a relationship through the mechanism of oral assessments; therefore, the student will be more likely to successfully complete the course in that they have established a relationship with the teacher through the increased communication resulting from oral assessments. Additionally, students are required to complete the oral assessments, so communication with the teacher will take place in this environment. For the purpose of this study, the change in student success after the implementation of oral assessment will indicate whether increased interaction between the student and teacher truly engages students enough to remain active in and successfully complete FLVS courses. Oral assessments should increase student success as identified in Kearsley's Theory of Engagement (2000) within the Relate Category.

Analyzing the success of students over the 10 year period will enable the researcher to determine if changes in policy are truly increasing student success. If it is determined that student success changes are not statistically significant over the 10 year period despite the aforementioned policies designed to increase student success, alternatives to online education will be discussed and recommended so as to increase economic efficiency of tax-payer dollars.

### **Federal Policy: The No Child Left Behind Act of 2001**

The No Child Left Behind Act (NCLBA) of 2001 is a widely-known piece of legislation that has changed the way education is delivered and evaluated in this country. Its focus on performance outcomes<sup>14</sup>, accountability, and school choice in the form of vouchers (Salamon, 2002) embody the essence of governance (Tucker, 2007). As a result, states throughout the country are developing standardized tests to measure the learning gains of students as a means to report their ability, or in some cases, inability, to successfully increase student achievement. The NCLBA identifies specific groups of students in which performance measures must improve annually in an attempt to have all students deemed as successful by the year 2014 (Linn, 2003).

The literature available on the NCLBA is almost endless, and it is not the purpose of this study to provide an exhaustive analysis of the NCLBA or to place a value judgment on the merits of the legislation. The discussion of the NCLBA in this study will enable the researcher to determine whether FLVS has created and implemented policies that are effective in increasing student success, as well as determine if the legislation has been effective in increasing student success at FLVS.

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<sup>14</sup> Governance focuses on performance results rather than the process as is seen in the government model (Walters, 2001).

### *Purpose of the No Child Left Behind Act of 2001*

According to Linn (2003), the purpose of the NCLBA of 2001 is to increase accountability<sup>15</sup> in the education system thereby increasing the “quality of education for all students” (p. 3). The NCLBA measures accountability through performance outcomes such as graduation rates, standardized test results, the percentage of students tested<sup>16</sup>, attendance records, a decrease in grade to grade retention rates, and increases in the percentage of students completing advanced coursework (No Child Left Behind Act of 2001). The NCLBA focuses on obtaining significant improvements in academic standing for the following groups of students: minority students; disabled students; limited English proficiency students; and student of low socioeconomic status (No Child Left Behind Act of 2001). Although target groups are identified in the NCLBA of 2001, it is not the intent of this study to analyze the success of students in these subgroups; rather, it is the intent of this study to analyze the success of students overall. Future studies can focus on the target groups identified in the NCLBA of 2001.

### *Ramifications for non-compliance*

The NCLBA of 2001 mandates that students make Annual Yearly Progress<sup>17</sup> (AYP) in terms of learning gains for the students. Each state is responsible for reporting AYP, and for schools in which the students do not meet the AYP goals, federal funding can be withdrawn.

According to the NCLBA, AYP is based on baseline data collected from the 2001-2002 academic year. The NCLBA states that by the year 2014, all students should have attained

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<sup>15</sup> Accountability is a form of governance which is usually tied to a performance measure or outcome.

<sup>16</sup> 95% of eligible students must be tested annually (No Child Left Behind Act of 2001)

<sup>17</sup> Annual Yearly Progress is deemed satisfied as long as there is a 1% increase in students obtaining proficiency overall and for each target group (Linn, Baker, & Betebenner, 2002). Proficiency is measured through standardized tests which are created by the state and administered to the students. The standardized tests measure the mastery of standards set forth by the state (Weckstein, 2003).

proficiency in reading, mathematics, and science (No Child Left Behind Act of 2001).

According to the NCBLA of 2001, annual measurement of student performance in reading and mathematics was scheduled to begin immediately upon implementation, with testing in science to begin in the 2005-2006 school year. Schools that do not receiving a passing grade (do not meet AYP goals) for two consecutive years face additional repercussions; students enrolled in schools that do not receiving a passing grade for two consecutive years can voluntarily transfer or use a voucher<sup>18</sup> to attend a school that has received a passing grade.

The voucher system, in theory, results in increased competition between schools, thereby increasing the quality of education (Kamarck, 2002; Levin & Belfield, 2003). It is expected that schools that receive a passing grade will be able to more effectively educate the youth of America. Schools that do not meet AYP must give students the opportunity to transfer to a passing school by the first day of the school year and must give priority transfer to students that are the lowest performing or from the lowest socioeconomic status (No Child Left Behind Act of 2001). In addition, the NCLBA of 2001 reserves the right to terminate the employment of teachers, staff, or administration that are identified as contributing to the academic failure of the students; change the curriculum; decrease the authority of the principal and district staff; require a longer school day or school year; require a private audit of the school; require the management of the school be turned over to private entity; require the management of the school to be turned over to the state education system; or restructure the school if it school consistently fails to make AYP. As can be seen, this legislation is concise, aggressive, and intolerant of substandard performance. The academic performance of all students should be increasing at FLVS, thereby

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<sup>18</sup> Vouchers are a form of governance (Kamarck, 2002).

indicating that FLVS has been instrumental in implementing policies that comply with the mandates of the NCLBA of 2001. If it is found that student success at FLVS is not increasing or the increases are not statistically significant, the researcher can conclude that FLVS has not implemented policies that comply with the mandates of the NCLBA of 2001.

### **Chapter Summary**

It is clear that there have been several policy changes at FLVS since its creation in 1997. To date, no studies have been conducted which test the effectiveness of policy on student success in the secondary online education environment. This study will determine if the policies noted above are truly effective in increasing student success in the secondary online education environment with analysis of students at FLVS. Florida Virtual School is the leader in state-funded online education and the results of this study can be generalized to publicly funded secondary online education schools that have mirrored the policies and procedures at FLVS.

In addition, the NCLBA of 2001 mandates that learning gains are achieved in education; this has not been tested at FLVS and it is imperative to determine whether or not student success, as measured by the student's final letter grade, is truly increasing at FLVS. If it is found that the policy changes at FLVS are not increasing student success in the secondary online education environment, it will be necessary for future researchers to delve further into the problem and detect why student success is not increasing (as mandated) in this learning environment.

## CHAPTER 3. THEORETICAL FRAMEWORK

Determining the theoretical framework for any given study is a necessary step which guides the direction of the study and in developing the study variables for policy analysis (Gliner & Morgan, 2000). This study will be based on institutional theory; however, it is important to first discuss relevant theories that could be considered, but eventually eliminated as appropriate theories to guide this investigation.

### Theories Considered

#### *Contingency Theory*

There are several variables that contribute to student academic achievement. At FLVS, the goal of the organization is to provide students with an option for completing credits and to provide a learning environment that is engaging, reputable, and challenging. Florida Virtual School cannot control external variables that affect student performance such as family problems, personal anxieties, etc. The literature reveals that there are patterns in performance regarding race, gender, socioeconomic status, type of school, and GPA; therefore, the researcher began to look for a theoretical model that had the capacity to control for the influence of demographics on student success. In addition, the researcher felt that because FLVS operates in an open system and is responsive to the environment outside of the organization that this study needed to be based on an open systems theory.

Contingency Theory, developed by Lawrence and Lorsch (1986) is an open systems theory which allows for external changes to impact internal performance. Lawrence and Lorsch (1986) stated that “organizational variables are in a complex interrelationship with one another and with

conditions in the environment” and that an infusion of internal and external conditions within an organization will lead to high performance (p. 157). Although the initial intent of the researcher was to use this theory as the framework for the study, the direction of this study changed with the publication of the Florida TaxWatch 2007 report and a greater understanding of Contingency Theory overall; therefore, Contingency Theory has been eliminated as a theoretical framework for this study.

#### *Aptitude-Treatment Interaction Theory*

Upon concluding that Contingency Theory was not appropriate for this study, the researcher began searching theories in education that may be relevant to this study. In doing so, the researcher found that most education theories were related to how a person learns rather than how organizational or school policy impacts student performance. In that the intent of this study is the outcome rather than the process of student learning, these theories did not apply to the study. Still hoping to utilize an education theory that included some form of policy intervention so as to measure the impact of policy on student performance, the researcher found the Aptitude-Treatment Interaction Theory. The Aptitude-Treatment-Interaction theory states that the level of learning one attains is based upon one’s aptitude; therefore, different teaching techniques are necessary in order to produce similar outcomes in performance (Aptitude-Treatment Interaction, n.d.). It was the intent of the researcher to utilize the “treatment” portion of this theory as changes in policy at FLVS; however, several policies overlap and the ability to create indicators to measure each policy change independently is not possible. Therefore, this theory was eliminated as a choice for this study.

### *Theory of Economic Regulation*

The researcher shifted the goal of this study to focus on student success on the aggregate level so as to have a theory that is based more on public policy than individual differences in education. In addition, the publication of the Florida TaxWatch report in November, 2007 ignited a new interest and perspective for the researcher which changed the direction of the study. Rather than analyzing the impact of every major policy at FLVS, the researcher intended to improve upon the Florida TaxWatch (2007) report and evaluate the success of FLVS to correct the market failures in education as identified in the NCLBA. When researching public policy theories and public interest theories, Stigler's Theory of Economic Regulation began to appear frequently and was cited in many of the articles that were consulted during this process. The Theory of Economic Regulation is a very academic and complex theory; however, the basic idea of this theory is that politicians respond to pressure from interest groups and large voting blocks in the form of regulation so as to prevent, correct, or manipulate existing commodities in the market (Stigler, 1971). Peltzman (1976) created a less complex theory of regulation and criticized Stigler's theory arguing that his theory is too general and is a numbers game in which the interest groups with the most members are powerful enough to influence the voting of elected officials.

Tunguay, Lanoie, & Moreau, 2001 stated that Stigler's theory is founded upon the principle of supply and demand; namely, the demand of interest group pressure on the government to supply certain regulations. Similarly, Crone & Tschirhart (1998) state that Interest Group Theory and Capture Theory are also names used to describe Stigler's Theory of Economic Regulation and is grounded in the concept that interest groups carry significant influence in the



political arena. In researching these pseudonyms for the Theory of Economic Regulation (Texas Politics..., n.d.), it was concluded that the essence of these theories, and the articles in which these theories are cited, are more applicable to regulating consumable commodities. The researcher could not justify using this theory as a framework as the inclusion of interest groups in forcing regulation does not relate to the purpose of this study.

### *Public Interest Theory*

The Public Interest Theory (PIT) emerged as one of the most applicable public policy theories to guide this study. The Florida TaxWatch Report (2007, p. 10) stated that "...Florida Virtual School is fundamentally a market-driven school choice program," and Levin & Belfield (2003) argued that the failure to properly educate the youth of today's society was a market failure. The use of the term "market" in these statements convinced the researcher to further explore the possibility of using PIT in this study; however, the fact that the education system does not exist in a free-market setting (with the exception of private schools) and is government-sponsored, the theory does not directly apply to this study. For the purpose of discussion; however, the PIT praises and critiques will be outlined below.

In a study comparing PIT and the Theory of Economic Regulation as it relates to Environmental Performance, Demirbas (2005) states the following:

...public interest theory (PIT) explains the reasons why governments intervene in the economy in the presence of externalities...and how to maintain the optimum resource allocation. The government, in order to correct externalities or increase welfare level of the nation, intervenes in the economy either through economic instruments such as taxes, or through regulation with penalties for non-compliance (p. 2-3).

Tunguay, Lanoie, & Moreau (2001) also compared PIT and the Theory of Economic Regulation as it relates to environmental policy and defined PIT as follows: "...government action must aim to maintain a situation of optimum well-being for the entire population of a country" (p. 3). In addition, they reference the application of microeconomics in this theory stating that "governments are justified in intervening in the economy in the presence of externalities...since their presence constitutes an obstacle to optimum resource allocation" (Tunguay, Lanoie, & Moreau, 2001, p. 5). Critical of PIT, Crone & Tschirhart (1998) state that PIT "claims that government agencies are created to address market failures and make decisions which maximize economic efficiency" and also say that PIT is not a good theory for anticipating government decisions when compared to Stigler's Theory of Economic Regulation (p.405). In his book review on Schubert's *The Public Interest: A Critique of the Theory of Political Concept*, Miller (1961) notes Schubert's assertion that the verbiage of public interest is too broad and states that any action a politician makes is in the public interest as is any action that any person makes. Miller (1961) notes that Schubert discussed the "scattered literature" and instability of the theory as it applies to elected officials (p. 579). Hagerman & Ratchford (1978) hold similar beliefs to Schubert's work, noting that the actions of elected officials are not altruistic; rather their actions will vary based upon how much they are being paid for the position, the size of their position (the larger the group, the easier it is for elected officials to take risk), the duration of their term, and whether they are appointed or elected to their position.

Although the aforementioned policies have components that are applicable to this study, they are not the best choice to guide this research. Institutional theory will be used to guide this study and will be discussed below.

## **Institutional Theory**

A widely used and respected theory, institutional theory provides a framework upon which the policies in this study can be analyzed. Institutional theory states that organizations tend to be similar in structure based on the concept of isomorphism (DiMaggio & Powell, 1983). Isomorphism is defined as “a constraining process that forces one unit in the same population to resemble other units that face the same set of environmental conditions” (DiMaggio & Powell, 1983, p. 149). According to DiMaggio & Powell (1983), isomorphism is based on three mechanisms: coercive, mimetic, and normative. Coercive isomorphism occurs when policy dictates that a given action or inaction takes place; failure to comply will result in sanctions. Mimetic isomorphism emerges when an organization mimics or copies another organization’s policies or procedures based on best practices. Normative isomorphism generates compliance of professional standards or professionalism through means such as licensure or certification (DiMaggio & Powell, 1983). As a result of this isomorphism, organizations in the same field typically look very similar; in this study, the organization is education on the macro-level, and online education on the micro-level. Florida Virtual School has been impacted by six substantial policies at the organizational level, and one major policy at the federal level. It is the intent of the researcher to categorize the seven major policy changes that impacted FLVS in the past decade into one of the three mechanisms of isomorphism. In doing so, the three types of policy are used as explanatory variables in an attempt to account for some of the variance in student success at FLVS if the change in student success over the study period is found to be statistically significant.

Institutional theory has been used to explain changes in education in secondary and higher education in the United States and internationally. The concept of isomorphism has been applied to education on different occasions in an attempt to understand changes in policy and administration. According to Morphey & Huisman (2002), the impact of institutionalism exists in organizations in which “ambiguous technologies (e.g., teaching)...produce outputs (e.g., knowledge, very capable students) whose ‘value’ and ‘quality’ are very difficult to determine” (p. 495). Oplatka (2004) stated that institutional theory is a good framework for “strong institutional environments such as schools and hospitals” (p. 146). For the purpose of this study, outputs, as referenced in Morphey & Huisman (2002), will be quantified as the final letter grade that a student receives in a FLVS course, thereby generating a GPA for the school over the study period.

Morphey & Huisman (2002), Seldon & Angus (1999), Gounko & Smale (2007), and Cox (2005) cite institutional theory as the guiding framework for the research in higher education policies and performance. According to Morphey & Huisman (2002), institutional theory “presents a useful lens through which to examine and to explain why academic drift occurs;” in this context, academic drift is referring to higher education and how colleges and universities are changing their policies and program offerings based on the mechanics of institutional isomorphism (p. 492). Although based on academic drifts in higher education, the finding of Morphey & Huisman (2002) are very interesting and contribute to the logic that education systems change as required by law through coercive isomorphism, through professional development by means of normative isomorphism, and through competition and best practices through mimetic isomorphism. Morphey & Huisman (2002) focused on the

number of program changes in higher education and found that community colleges or less prestigious colleges were more inclined to change policies and programs than universities or more prestigious colleges. Seddon & Agnus (1999) studied changes in Australia's education system and found that institutional changes in education have led to the perception that students are clients and "have become regarded as products to industry whose needs are to be served" (p. 494). Seddon & Agnus (1999) note that the government dictates policy, and regardless of the willingness to change on the part of the teachers or other stakeholders, change will occur and it will be unified as is seen in coercive isomorphism. Gounko & Smale (2007) found that the changes in higher education were a result of coercive, mimetic, and normative isomorphism in Russia under President Putin's guidance. Cox (2005) found that community colleges have changed in recent years through the mechanism of institutional isomorphism as a means to be competitive with four-year colleges and universities and offer online education as a means of delivery for education. Although these findings are based on research in higher education, the concept of applying institutional theory to education is an accepted framework upon which to guide research in this area.

In secondary education, Oplatka (2004) and Traver (2006) use institutional theory as their guiding framework on which to base their research. Oplatka (2004) studied the role of institutionalism on choice in the education system and found that isomorphism essentially led to parent choice in that "schools engaging in the market-place are measured by their students' academic achievements...and may be urged to adopt any innovation which is publicly perceived as increasing these achievements, even if its contribution to higher achievements has not yet been proven" (p. 148). In other words, the competition of better secondary education has led to a

competitive tone in education which, in turn, leads to mimetic isomorphism so as to improve student success. According to Traver (2006), New York City mayor, Mayor Bloomberg, overhauled the education system through the mechanisms of coercive and mimetic isomorphism when he eliminated the Board of Education and restructured the education system in the city. Traver (2006) noted that the norms and values of the teachers were resistant to the changes made in the education system which, in part, did not contribute to the overhaul in education as expected. It is suspected that the mechanism of coercive isomorphism begets change; however, in education, it is possible that coercive policies are resisted amongst the teachers and administrators that are subject to changing their behaviors as a result of change in policy. In this study, the focus is on changes in student success as a result of policy changes; however, the concept of a linkage between education and institutional theory is substantiated in the literature.

### **Hypotheses**

The purpose of this study is to determine the level of impact policy has on student success; therefore, the hypotheses generated for this study are related to the three types or mechanisms of isomorphism as they are related to policy as outlined above. Chapter 4 will discuss the methods with which a classification for the identified policies in this study will be categorized.

H<sub>01</sub>: Coercive policies do not have a statistically significant impact on student success.

H<sub>1</sub>: Coercive policies have an impact on student success that is statistically significant.

The nature of coercive policies begets compliance. Policies that sanction non-compliant stakeholders are effective in promoting the desired outcome. The literature indicates that

coercive policies have an impact on performance as noted in Morpew & Huisman (2002), Seldon & Angus (1999), Gounko & Smale (2007), and Traver (2006) which all discuss the role of government policy and intervention in education which ultimately results in change, even if the stakeholders are not convinced that the policy change is most beneficial for the students.

H<sub>02</sub>: Mimetic policies do not have a statistically significant impact on student success.

H<sub>2</sub>: Mimetic policies have an impact on student success that is statistically significant.

Policies that are copied from successful organizations (best practices) will likely produce similar results in parallel organizations. Policies that have been effective in other educational systems and are based on research will likely improve student success at FLVS. According to Oplatka (2004), the mechanism of mimetic isomorphism should increase the effectiveness of schools through increased competition; in that FLVS is a choice for Florida residents and competition exists to recruit students to the organization, mimetic policies should have a statistically significant impact on student success.

H<sub>03</sub>: Normative policies do not have a statistically significant impact on student success.

H<sub>3</sub>: Normative policies have an impact on student success that is statistically significant.

All teachers at FLVS are required to hold a Professional Educator's Certificate from the State of Florida. Any policy that requires professional development or maintenance of licensure will qualify as a normative policy and will likely increase student success. Professional development in the environment of education is student-centered; acquisition of professional development will most likely lead to an improvement in student success in that the knowledge gained will aid in

the professional's ability to foster learning in the online environment. Morpew & Huisman (2002), Gounko & Smale (2007), Traver (2006), and Oplatka (2004) discuss the role of normative isomorphism in creating a set of expectations and guidelines that is universal throughout a type of organization. In education, as discussed in the aforementioned works, normative isomorphism is gained through required professional development and trainings which collectively influence teachers across the country and the world.

H<sub>04</sub>: The influence of coercive policies on student success is not more positive than that of mimetic and normative policies.

H<sub>4</sub>: The influence of coercive policies on student success is more positive than that of mimetic and normative policies.

In that coercive policies have sanctions for non-compliance, it is expected that the compliance requirement associated with coercive policies will result in increased student success. Policies that do not have sanctions for non-compliance may not result in voluntary compliance or a statistically significant impact on student success. As noted in Gounko & Smale (2007), the power of the government to impose policy on education will result in changed behaviors regardless of the will of the stakeholders; unified change will occur when coercive policies are implemented.



H<sub>05</sub>: The change in funding from a line-item allocation to a pay for performance payment will not increase student success.

H<sub>5</sub>: The change in funding from a line-item allocation to a pay for performance payment will increase student success.

It is logical to expect that a requirement in students passing their FLVS courses in order for FLVS to receive payment from the state legislature will result in an increase in student success. The change in funding may not change the student's behavior; however, the efforts by teachers and administrators may lead to an increase in student success. Gounko & Smale (2007) indicate that funding is a type of coercive isomorphism in that schools must "comply with new modernization policies and legislation if they want to receive funding" (p. 543). Although Gounko & Smale (2007) were referring to higher education, the principle is the same for FLVS in that it is a state-funded program. Based on the literature and logic, it is concluded that funding tied to student success will lead to increased student success over time.

H<sub>06</sub>: The number of policies in a given year is not positively related to the change in student success measures.

H<sub>6</sub>: The number of policies in a given year is positively related to the change in student success measures.

As will be discussed in Chapter 5, the overall mean (GPA) of students completing a course with FLVS will be generated per academic year. As the number of policies designed to promote

student success increases over the ten year period, it is expected that the change in overall mean (GPA) of student success will be statistically significant.

H<sub>07</sub>: The number of non-completions at FLVS is not negatively correlated as the number of policies increases.

H<sub>7</sub>: The number of non-completions at FLVS is negatively correlated as the number of policies increase.

Analysis of the non-completions at FLVS is a very important aspect of this study. It is logical to conclude that as the number of policies designed to increase student success at FLVS are implemented, student attrition should be decreasing. It is expected that the percentage of non-completions should decrease as the number of policies increases. As noted in Cox (2005), Oplatka (2004), Seddon & Angus (1999), and Morphey & Huisman (2002), isomorphism results in change in education whether it is through coercive, mimetic, or normative isomorphism; therefore, it can be expected that as the number of policies designed to increase student success are implemented, the number of non-completions will decrease.

### **Chapter Summary**

In searching for an appropriate theory to guide this research, many viable theories were considered. Upon reviewing the literature and the possible theories, institutional theory has emerged as the most viable framework for this study. Institutional theory guides this study in terms of determining which types of policy are most effective at improving student success in the secondary online education environment through a case study of one of the most prominent secondary online education schools, Florida Virtual School. Using institutional theory as the

framework for this study enabled the researcher to determine which mechanism of isomorphism generates the most positive outcomes in secondary online education.

## **CHAPTER 4. METHODOLOGY**

### **Study Design**

This is a pooled cross-sectional time-series design in that one group (FLVS students) was studied “prior to and after the introduction of the intervention” (Gliner & Morgan, 2000, p. 68). The interventions in this study are organizational and federal policies and are used as explanatory variables (in the form of the academic year in which the policy change took place) to explain the variance in student success at FLVS during the study period. Second, a survey was administered to the faculty and staff at FLVS in order to gather the following information: 1) classification of policy types for the purpose of qualitative analysis; 2) perceived effectiveness of policy changes at FLVS in terms of improving communication between the student, teacher, and guardian; 3) perceived effectiveness of policy changes at FLVS in terms of ensuring student success in the secondary online education environment.

To analyze the data that FLVS provided and data from the survey, the researcher used Analysis of Variance (ANOVA) and regression analysis to determine the following: 1) detect that statistical significance of the independent variables on the dependent variable through ANOVA, and 2) determine the explanatory power of the independent variables through regression analysis.

### **Data Source**

Florida Virtual School provided the necessary data for this study (years 1998-2007) in exchange for a copy of the results upon completion. It was expected that the following data (variables) would be available for this study: student ID, race, gender, receipt of free/reduced

lunch, and final letter grade; however, data for the free/reduced lunch variable was not included in the data set provided to the researcher; therefore, the researcher was unable to include this variable in the study. Race and gender are student-reported variables and are not confirmed administratively; non-student reported data for these variables is not available for this time period. The data set provided the following cases for the researcher: 292,613 (30.69%) cases resulted in a final letter grade (including a failing grade) in a FLVS course; 660,670 (69.30%) cases did not result in a final letter grade (these cases were either incomplete course requests (46.6%), never activated enrollments (26.3%), withdrawn/no grade enrollments (16.3%), or never assigned enrollments (10.8%); and 25,096 (2.56% of total cases provided) cases were deleted for missing data.

Utilizing raw data from FLVS for all students from the 1998-1999 through 2006-2007 school years enabled the researcher to study student success over a large block of time, thereby enabling the researcher to draw conclusions as to whether organizational policies are contributing to increased student success at FLVS as mandated by the NCLBA of 2001. In addition, a survey was sent to the faculty and staff of FLVS in order to generate information on the following: 1) perception of the type of the type of policy implemented at FLVS based on institutional theory (coercive, mimetic, or normative); and 2) perceived impact of identified policies on student success guided by Kearsley's Theory of Engagement (2000). The survey was administered through FLVS by means of surveymonkey.com. The survey was open for one week and was available to the entire faculty and staff of FLVS of 729 employees; 156 (22%) of those surveyed responded. The staff was emailed two times in an attempt to increase the response rate of the survey. Please refer to Appendix B to review a summary of the responses.

## **Sampling**

Data from school years 1997-2007 included the entire population of FLVS students. The survey portion of this analysis was administered to the entire faculty and staff at FLVS. Because the study subjects include the entire student population of the same institution as well as the FLVS faculty and staff, no sampling strategy is needed.

## **Operationalized Variables**

Please refer to Appendix A to review how the independent, dependent, control, and dichotomous variables are operationalized for the purpose of statistical analysis. Academic year served as an independent variable in this study in that the researcher is analyzing the impact of policy on student success. At FLVS, new policies are typically implemented at the beginning of an academic year; therefore, the use of academic year as the independent variable to explain the dependent variable (final letter grade) is logical. Control variables in this study are race, gender, and GPA. It was the intent of the researcher to include additional control variables; however, the data was not reliable and was deemed inappropriate for use in this study. The dependent variable in this study is the final letter grade that a student receives in a FLVS course. Dichotomous variables were used for the purpose of conducting regression analysis. Also known as dummy variables, the dichotomous variables in this study are designed to determine how much variance in the student's final letter grade can be attributed to specific policies present in a given academic year. The dichotomous variables in the study are as follows: grace period, pace chart, monthly phone calls, NCLBA, funding, discussion groups, and oral assessments.

## Statistical Procedures

The unit of analysis in this study is student success as measured as the final letter grade a student received in a FLVS course. The purpose of this study is to determine what types of policies, if any, have a statistically significant impact on student success and whether or not any statistically significant findings explain the variance in student success throughout the study period.

Hypothesis testing in this study was conducted utilizing three procedures: 1) Analysis of Variance (ANOVA); 2) survey; and 3) regression analysis. Analysis of Variance was used in this study to determine if there is a statistically significant difference in student success at FLVS during the study period with varying policy changes. ANOVA is a “statistical test of the hypothesis that two or more population means in an independent sample design are equal” (Spatz, 2005, p. 225). The researcher created two data sets for analysis: 1) students that completed a FLVS course, and 2) students that did not complete a FLVS course. The purpose of having two data sets is to enable the researcher to analyze the change in the mean of students that completed a FLVS course and students that did not complete a FLVS course separately. The data set for course completions was coded as the final grade a student received in an FLVS course as follows: A=4; B=3; C=2; D=1; F=0; the student’s final letter grade serves as the dependent variable for analysis of hypotheses 1 through 6. Coding the final grade for each student in this manner enabled the researcher to generate a mean grade for the given year, or essentially, a GPA of the school for the academic year. The data set for non-completions was coded as follows: 5=course request incomplete; 6=never activated; 7=never assigned; 8=withdrawn/no grade. In this study, the academic year is the independent variable and is used

to explain patterns of performance (student's final letter grade) for both data sets. The final grade a student receives in a FLVS course in the completions data set is the dependent variable; the reason for non-completion serves as the dependent variable for the non-completions data set. For both data sets, the control variables are gender and race. The researcher wanted to include receipt of free/reduced lunch as a control variable; however, the data was not provided in the data set from FLVS and could not be included in this study.

The survey was administered to the entire faculty and staff of FLVS. Respondents were asked to classify policy changes at FLVS into one of three types of isomorphism: coercive, mimetic, or normative. In that the faculty and staff of FLVS are immersed in the policies every day, it was necessary to utilize their expertise as to how the policy was implemented and how the associated ramifications for non-compliance were carried out in the organization. For example, the implementation of the 28-day grace period may appear to be a coercive policy on the surface, yet those carrying out the policy may view it as a mimetic or normative policy in practice; therefore, it was important to receive classification of the policies from stakeholders involved in the policy rather than from the perspective of an individual that is not involved in the processes of the organization. The researcher used the mode of each policy classification for the purpose of this study which enabled an analysis that combined ANOVA, descriptive statistics, and regression analysis to test the hypotheses 1-6. If ANOVA found that there was not a statistically significant change in student success during the study period, then further analysis would not have been necessary; however, in that statistical significance was found, it was important for the researcher to further analyze the data and identify trends in student performance based on the



type of policy implemented in a given academic year, thereby warranting the conduction of regression analysis.

Regression analysis is defined as a statistic that is “used to predict normally distributed criterion (dependent) variable from a combination of several normally distributed, or dichotomous predictors (independent variables), or both” (Gliner & Morgan, 2000, p. 294). In other words, regression analysis is useful for researchers to determine how much of the variance in the dependent variable is contributed to the control, independent, and dichotomous variables individually. Comparing the standardized beta value of each independent variable enables the researcher to determine the relative contribution of each independent variable comparatively (Pallant, 2005). Statistics derived from Regression analysis are generalizable when there is a large sample size, and researchers should be aware of the possibility of multicollinearity and singularity in their data set (Pallant, 2005). Multicollinearity exists “when the independent variables are highly correlated...(and) singularity occurs when one independent variable is actually a combination of other independent variables (Pallant, 2005, p. 142-143). In that the entire population is used in this study, regression analysis is a sound statistical tool for this study. Multicollinearity and singularity will be tested when the analysis is conducted.

In testing  $H_7$  regarding non-completions, the researcher combined ANOVA and descriptive statistics. Had ANOVA not detected a statistically significant change in the mean during the study period, additional analysis would not have been necessary. This method proved to be very beneficial in identifying patterns of performance regarding student success, the number of withdrawals, and the number of non-completions at FLVS during the study period.

### *Threats to Internal Validity*

History and Maturation threats to internal validity exist in this study. History and Maturation threats are present in this study in that students that take more than one course with FLVS will gain experience and knowledge on the course template, process, and policies; therefore, they will be more likely to succeed in subsequent courses regardless of a change in policy (Florida TaxWatch, 2007). Although mortality occurs in the secondary online education environment, FLVS cancels the accounts of students that have passed away; therefore, data on students that have passed away are not included in the data set that FLVS provided. Other types of mortality, for example, if a student quits working in a class or is withdrawn, are accounted for in this study and are classified as non-completions or are issued a failing grade which is included in the data set for completions. Other threats to internal validity (regression-to-the-mean, testing, instrumentation) are not present in this study due to the analysis procedures. Social threats to internal validity are not present in the study in that the data used in this study is retrospective and was collected without bias on the part of the student or the organization.

### *External Validity*

The Center for Digital Education (2008) ranked Florida's online learning program as the number one example of "online learning policy and practice across the United States" (p.2). Florida Virtual School is the leader in secondary online education and its policies and procedures are imitated throughout the United States; however, FLVS is the only state program that has a pay-for-performance model (S. Patrick<sup>19</sup>, personal communication, October 20, 2008). To date, there are approximately fifteen states which have a state-led online learning program similar to

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<sup>19</sup> Susan Patrick is the President and CEO of NACOL, The North American Council for Online Learning.

that of FLVS (Center for Digital Education, 2008). Sixteen states have online learning programs that are not state-led, and seventeen states do not have an online learning program at this time<sup>20</sup>. According to the Center for Digital Education (2008), Tennessee and Pennsylvania are currently planning an online learning program for their students.

### **Measurement**

Analysis of Variance is used to detect the main effect of policy changes on student success. A p-value of .05 or less indicates that the variance detected in the mean of student success is attributed to the intervention rather than to error. A p-value of .05 or less is considered statistically significant; this indicates a confidence interval of 95%, meaning that the researcher is 95% confident that the change in student success is due to the intervention (in this study, the policy change). In addition, effect size is taken into consideration when testing data with ANOVA. The accepted standards for effect size are as follows: “.01=small, .06=moderate, .14=large” (Pallant, 2005, p. 227). A smaller effect size is desired; a larger effect size indicates that a statistically significant difference is found, in part, due to the large sample size. For ANOVA, the following formula is used to determine effect size: “ $\text{Eta}^2 = \text{Sum of squares between-groups} / \text{Total sum of squares}$ ” (Pallant, 2005, p. 219). Levene’s homogeneity of variance test indicates “whether the variance in scores is the same for each...group” (Pallant, 2005, p. 218). The value for Levene’s test should be greater than .5; a number less than .5 indicates that the homogeneity of variance assumption has been violated (Pallant, 2005).

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<sup>20</sup> California, Connecticut, Delaware, Kansas, Maine, Minnesota, Montana, Nebraska, Nevada, New York, Ohio, Rhode Island, Vermont, Washington, and West Virginia do not have an online learning program or plans to implement one in the near future (Center for Digital Education, 2008)

Regression analysis is more complex and tests more assumptions in the data set than ANOVA. Multicollinearity, as noted previously, is a concern when conducting regression analysis. To test the multicollinearity of the variables, Tolerance and Variance Inflation Factor (VIF) will be tested (Pallant, 2005). Tolerance levels should be above .10, while the VIF value should be less than 10; should the analysis indicate that the Tolerance and VIF levels are inadequate, it is most likely that multicollinearity is present in the data set (Pallant, 2005). Standardized coefficients will be analyzed in this study so as to provide a relative comparison of the independent variables and their contribution to the variance in the dependent variable. Finally, statistical significance will be discussed and determined with a p-value of .05 or less; a p-value greater than .05 indicates “that the variable is not making a significant unique contribution to the prediction of your dependent variable” (Pallant, 2005, p. 154).

### **Analytical Methods**

Hypotheses 1 through 6 were tested through first determining if the change in the mean of student success was statistically significant through the use of ANOVA. Upon determining that the change in the mean was statistically significant, the researcher administered a survey to the faculty and staff at FLVS to determine the types of policies and perceived impact of the policies on student success. Analysis of the survey data enabled the researcher to compound the number and types of policies in effect in a given academic year. Analyzing the pattern of the mean when compared with the number and types of policies enabled the researcher to conclude which type of policy (or isomorphic mechanism) appears to be the most effective in impacting student success in the secondary online education environment. Finally, regression analysis was

performed to determine the contributions of independent variables on the amount of variance in student success throughout the study period.

Hypothesis 6 was tested through ANOVA and was used to statistical significance of the change in the mean of student success. The manner in which the data was coded enabled the researcher to confidently make conclusions about the data. For example, withdrawn/no grade was coded as “8,” which means that logically, the mean should be decreasing because the number of withdrawn/no grade enrollments should be decreasing as new policies designed to improve student success were implemented at FLVS.

Hypothesis 7 was tested through ANOVA and descriptive statistics. ANOVA was used to determine if the change in the mean was statistically significant, followed by an evaluation of the descriptive statistics regarding the types of non-completions and the academic year which enabled the research to test and conclude the hypothesis.

## CHAPTER 5. FINDINGS

### Research Questions and Related Hypotheses

The purpose of this study is to answer the following research questions as outlined in Chapter 1:

- 1) Has student success, as measured by final letter grade, increased at FLVS from 1998-2007?
- 2) Do changes in policy play a role in increasing student success at FLVS?
- 3) Does the number of active policies in a given year play a role in increasing student success at FLVS?
- 4) Have the mandates and sanctions of the NCLBA of 2001 provided sufficient pressure on FLVS to implement policies that effectively increase student success?
- 5) Has the change in funding from a line-item allocation to performance-based reimbursement increased student success at FLVS?

In the following section, the researcher answers these questions through hypothesis testing and the use of the following statistical tools: ANOVA, descriptive statistics, and regression analysis. For research question 1, the researcher coded the final letter grade a student receives in a FLVS course in the same manner in which a GPA is generated; this enabled the researcher to compare the mean of the school from one academic year to the next during the study period. Research question 1 is tested through hypotheses 1 through 3. For research question 2, the researcher again used ANOVA to determine if the mean of the school changed from one academic year to the next, followed by regression analysis to determine the contribution of policy to the variance in student success. Next, the researcher determined the mode of each policy type classification

as generated in the survey and was able to determine which types of policy play a role in increasing student success at FLVS through a qualitative analysis. Research question 2 was tested through hypotheses 1-4. Research question 3 was tested through hypothesis 6 and was tested through a combination of ANOVA and descriptive statistics in which the researcher was able to draw conclusions about the compounded affect of multiple policies on student success in a given academic year. Research question 4 was tested through ANOVA; analyzing the mean of the school before, during, and after the implementation of the NCLBA of 2001 enabled the researcher to answer the question. Research question 5 was tested through hypothesis 5 and was analyzed through ANOVA and regression analysis.

### **Hypothesis Testing and Results**

#### *Completions*

Preliminary analysis indicated that the school's GPA changed over the study period (Table 6). The mean of the school slightly increases each academic year from 1998-1999 school year through the 2002-2003 school year where a significant increase in mean is achieved. Then, the mean decreases substantially during the 2003-2004 school year, followed by another decrease in the mean from 2004-2005. In the 2005-2006 school year, there is a slight increase in the mean, followed by a decrease in the 2006-2007 school year. Initially, the researcher intended on using the year directly following the year in which a policy change was implemented to determine the effectiveness of the policy in increasing student success in order to account for any lag effect of policy implementation; however, the policies implemented at FLVS are implemented within the academic year in which the policy is introduced, so the mean (GPA) for

the year in which the policy is implemented is accurate for this analysis. Overall, it is clear that there are changes in the mean of student success at FLVS throughout the study period.

Table 6. Final Grade Mean (GPA) for FLVS Completions from 1998–2007

Final Letter Grade

Academic Year	Mean	N	Std. Deviation
1998-1999	1.92	1087	1.758
1999-2000	2.28	3854	1.687
2000-2001	2.59	8838	1.617
2001-2002	2.97	11527	1.428
2002-2003	3.20	13433	1.218
2003-2004	2.86	30189	1.494
2004-2005	2.72	46801	1.562
2005-2006	2.80	66147	1.471
2006-2007	2.59	110736	1.551
Total	2.72	292612	1.525

Next, the researcher compared the number of completions and non-completions to the GPA of the school and found that after substantial growth occurred after the 2002-2003 school year, the GPA of the school seemed to continue to decrease (Table 7). Data was available from the 2003-2004 through 2006-2007 school years regarding the number of teachers at FLVS and found that as the ratio of one full-time teacher to students changed and the teacher had more students, the GPA of the school declined (Tables 8-10); the ratio column is the number of students per one full-time teacher for each given year classified as completions, non-completions, and total enrollment.



Table 7. GPA of FLVS with Completions, Non-Completions, and Total Enrollment

Year	GPA	Number of Completions	Number of Non-Completions	Total Enrollment
1998-1999	1.92	1087	269	1356
1999-2000	2.28	3854	738	4592
2000-2001	2.59	8838	1652	10490
2001-2002	2.97	11527	2334	13861
2002-2003	3.2	13433	27600	41033
2003-2004	2.86	30189	65484	95673
2004-2005	2.72	46801	118100	164901
2005-2006	2.8	66147	180304	246451
2006-2007	2.59	110736	264249	374985

Table 8. Ratio of Teacher to Student: Completions

Academic Year	Number of Full-Time Teachers	# of Completions	Ratio	GPA
2003-2004	85	30189	355	2.86
2004-2005	119	46801	393	2.72
2005-2006	178	66147	372	2.8
2006-2007	175	110736	633	2.59

Table 9. Ratio of Teacher to Student: Non-Completions

Academic Year	Number of Full-Time Teachers	# of Non-completions	Ratio	GPA
2003-2004	85	65484	770	2.86
2004-2005	119	118100	992	2.72
2005-2006	178	180304	1013	2.8
2006-2007	175	264249	1510	2.59

Table 10. Ratio of Teacher to Student: Total Enrollment

Academic Year	Number of Full-Time Teachers	Total Enrollment	Ratio	GPA
2003-2004	85	95673	1126	2.86
2004-2005	119	164901	1386	2.72
2005-2006	178	246451	1385	2.8
2006-2007	175	374985	2143	2.59

In that a change in the mean clearly exists in the data set, the researcher tested statistical significance for the change in mean. Analysis of Variance, or ANOVA, was used to determine whether the changes in mean over the time period were statistically significant. As can be seen in Table 11, the change in the mean is statistically significant at a p-value of .000.

Table 11. ANOVA: Academic Year on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8458.088	8	1057.261	460.350	.000
Within Groups	672006.039	292603	2.297		
Total	680464.127	292611			

The effect size was also considered in the aforementioned and subsequent ANOVA analyses. In this case, the  $\eta^2$  is .012 which indicates that the change in the mean is most likely due to the academic year rather than to the sample size. In addition, the Levene test for homogeneity of variance was tested to determine whether or not the “variance in scores is the same for each...group” (Pallant, 218). Please review Table 12 to view the results of the Levene’s test of homogeneity of variance which is higher than .05, thereby not violating the homogeneity of variance parameters.

Table 12. Homogeneity of Variance – Levene’s Test

**Test of Homogeneity of variances**

Final Letter Grade

Levene Statistic	df1	df2	Sig.
623.422	8	292603	.000

In that a statistically significant change in mean was detected over the study period, it became necessary to determine which types of policy have been implemented at FLVS during the study period. The second part of this study, a survey administered to the faculty and staff at FLVS, had two purposes: 1) faculty and staff identification of the type of policy based in

institutional theory; and 2) faculty and staff identification of the perceived impact of policy on student success based on Kearsley's Theory of Engagement. Descriptive statistics derived from the data enabled the researcher to: 1) determine the mode for type of policy (coercive, mimetic, or normative) (questions 3-9 in Appendix B); and 2) determine the mean for perceived policy impact on student success (questions 10-29 in Appendix B).

Of the 729 employees surveyed, 156, or 22% responded. Of the 156 respondents, the respondents classified their role at FLVS as follows: 70.5% teacher; 3.8% Administrative team; 5.8% Curriculum team; .6% Global Services; 2.6% Instructional Leader/Learning Community Leader; .6% Literacy team; 1.9% Professional Development team; 3.8% support staff; and 3.8% Technical Support team. According to FLVS, 577 employees are classified as "instructional," and 152 are classified as "non-instructional" employees. Instructional employees include Instructional Leader/Learning Community Leader, full-time instructors, adjunct instructors, mentors, and the Literacy team, or 79% of the staff. Non-instructional employees comprise 21% of the staff. The respondents to the survey are representative of the staff as a whole as 73.7% of the respondents can be classified as "instructional" employees, and 26.3% of the respondents can be classified as "non-instructional" employees. A majority of the respondents have been employed with FLVS for less than one year (28%), followed by 3-4 years (25.6%), 1-2 years (25%), 5-6 years (12.2%), 7-8 years (5.1%), 9-10 years (1.9%), and over 10 years (1.3%). Unfortunately, some of the questions were not answered by all of the respondents. Refer to Table 13 to review the number of cases with missing data for each question.

Table 13. Number and Percent of Questions with Missing Answers – Survey Instrument

Question Number	Number Missing	Percent
1	0	0
2	0	0
3	15	9.6
4	15	9.6
5	16	10.3
6	15	9.6
7	15	9.6
8	15	9.6
9	15	9.6
10	14	9
11	14	9
12	14	9
13	14	9
14	14	9
15	14	9
16	14	9
17	14	9
18	14	9
19	14	9
20	14	9
21	14	9
22	15	9.6
23	15	9.6
24	14	9
25	16	10.3
26	16	10.3
27	17	10.9
28	16	10.3
29	16	10.3

Reliability of the survey instrument was designed as split-half methods reliability. Questions 10 through 19 were asked in a positive manner, and questions 20 through 29 were asked in a negative manner. A perfectly reliable instrument will measure “1” or “-1” as a

perfectly correlated response between the positive and the negative statements of the same question. Please refer to Table 14 to review the statements and the question numbers from the survey associated with the positive and negative statement measuring the same information, and the corresponding correlation coefficient generated through SPSS. To review the correlation coefficients table generated through SPSS, please refer to Appendix C. All of the questions have a statistically significant correlation with the exception of questions 13 and 23 regarding oral assessments with a correlation coefficient of  $-.126$ . It can be concluded that this is a reliable survey instrument and the conclusions drawn from this survey will be reliable.

Table 14. Split-half Reliability Test – Correlated Questions Survey Instrument

Statement	Positive	Negative	Correlation Coefficient
Participation in discussion group postings increases interaction between students and students.	10	20	-0.809
Monthly phone calls increase interaction between students and teachers.	11	21	-0.503
Participation in discussion group postings increases interaction between students and teachers.	12	22	-0.348
Oral assessments increase interaction between students and teachers.	13	23	-0.126
Monthly phone calls increase interaction between guardians and teachers.	14	24	-0.346
The 28-day grace period ensures that students will be successful.	15	25	-0.791
The pace chart ensures that students will be successful.	16	26	-0.84
The NCLBA of 2001 ensures that students will be successful.	17	27	-0.779
The funding change at FLVS from a line-item allocation to FTE ensures that students will be successful.	18	28	-0.755
Oral assessments ensure that students will be successful.	19	29	-0.735

Participants in the survey were asked to classify the major policy changes at FLVS into one of the three categories based on institutional theory: coercive, mimetic, and normative. The mode of each policy type, as generated in the survey, was used to determine the type of policy implemented at FLVS per academic year. Please refer to Table 15 to review the mode for each policy analyzed in this study.

Table 15. Mode of Policy Type as Classified by Survey Respondents

Policy	Policy Type Mode
28-day Grace period	Mimetic (44.9%)
Pace Chart	Mimetic (63.5%)
Monthly Phone Calls	Mimetic (59%)
NCLBA of 2001	Coercive (47.4%)
Funding Model	Coercive (42.9%)
Discussion Group Postings	Mimetic (58.3%)
Oral Assessments	Mimetic (67.3%)

Unfortunately, none of the policies were classified as normative policies as defined in institutional theory and will not be tested in this study. A majority of the policies are considered to be mimetic, with the exception of the NCLBA of 2001 and the change in funding, both of which are legislation, or public policy, and are not organizational policy. It appears as though survey respondents do not view the changes in organizational policy as coercive in nature. In terms of the effectiveness of coercive versus mimetic policies, please refer to Table 16 which has compounded the types of policies in effect at FLVS per academic year. As a reminder, the GPA for the year in which the policy was introduced to the organization will be used in that the policies are fully integrated on an academic year basis and will reflect any changes in the GPA within the year in which the policy was introduced.



Table 16. Total and Compounded Number of Policy Changes and Percent Change in GPA

Academic Year	Policy Change	Type of Policy	Total Number of Policy Changes	Compounded Type and Number of Policy Changes	Mean (GPA), FLVS	Change in GPA
1997-1998	Baseline	Baseline	Baseline	Baseline	0	Baseline
1998-1999	28-day grace period	Mimetic	1	1 Mimetic	1.92	N/A
1999-2000	Pace Chart	Mimetic	1	2 Mimetic	2.28	19%
2000-2001	None	N/A	0	2 Mimetic	2.59	14%
2001-2002	Monthly Phone Calls	Mimetic	1	3 Mimetic	2.97	15%
2002-2003	NCLBA	Coercive	1	3 Mimetic, 1 Coercive	3.20	8%
2003-2004	Funding	Coercive	1	3 Mimetic, 2 Coercive	2.86	-11%
2004-2005	Discussion Group Postings	Mimetic	1	4 Mimetic, 2 Coercive	2.72	-5%
2005-2006	Oral Assessments	Mimetic	1	5 Mimetic, 2 Coercive	2.8	3%
2006-2007	None	N/A	0	5 Mimetic, 2 Coercive	2.59	-8%

A very clear and surprising pattern emerges when analyzing Table 16. The GPA of FLVS increases steadily from the 1998-1999 academic year through the 2002-2003 school year. In the first few years of the study period, only mimetic policies were implemented at FLVS and the GPA of the school steadily increases; in 2002-2003, when FLVS was at its highest GPA, the NCLBA of 2001 (a coercive policy) had been fully integrated in the state, yet, subsequent years (with the exception of the 2005-2006 academic year where a slight increase (3%) in the school's GPA is observed) see substantial decreases in the GPA of the school. Interestingly, when the funding change took effect in 2003-2004, the school's GPA decreased for the first time from 3.2 to 2.86, an 11% decrease. The following year, the GPA decreased even more substantially from 2.86 to 2.72, or a decrease of 5%. It appears that the introduction and implementation of

coercive policies at FLVS has a negative impact on student success in secondary online education when analyzing the school's GPA.

It is clear that something is happening to cause the change in the school's GPA throughout the study period. The classification of the policies into the mechanisms of isomorphism provides the necessary framework upon which to conduct additional analysis. The proceeding analysis will include analysis of statistical output of ANOVA and will also include regression analysis. In order to successfully analyze the effectiveness of policies implemented at FLVS, it was important to determine their individual contribution to the variance in student success throughout the study period. As mentioned previously, dichotomous variables were created for each policy in this study, coded as 0-policy not present and 1-policy present. The initial regression model required modifications to eliminate variables that were not found to be statistically significant or that violated collinearity standards.

Table 17. Initial Regression Model – Independent Variables on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.633	0.000		
	Gender	.032	18.323	0.000	0.973	1.028
	Race	-0.073	-49.942	0.000	0.966	1.036
	GPA	0.317	172.160	0.000	0.898	1.114
	Academic Year	-0.033	-4.153	0.000	0.048	20.990
	Pace Chart	0.027	14.411	0.000	0.867	1.153
	Monthly Phone Calls	0.074	25.765	0.000	0.372	2.687
	NCLBA of 2001	0.046	12.709	0.000	0.235	4.262
	Funding	-0.060	-16.443	0.000	0.228	4.385
	Discussion Group	-0.022	-6.156	0.000	0.245	4.078
	Oral Assessments	0.084	19.452	0.000	0.164	6.086
a	Dependent Variable: Final Letter Grade					

SPSS automatically removed the grace period variable from the model in that this policy was present throughout the study period. Due to a violation of collinearity statistics for the VIF of academic year (20.990), this variable has been removed from the final regression model. All other variables do not violate the collinearity parameters and are statistically significant with a p-value of .05 or less.

Table 18. Modified Regression Model – Statistically Significant Independent Variables on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.182	0.000		
	Gender	.032	18.294	0.000	0.973	1.028
	Race	-0.073	-41.006	0.000	0.966	1.035
	GPA	0.318	173.956	0.000	0.911	1.097
	Pace Chart	0.025	13.811	0.000	0.924	1.082
	Monthly Phone Calls	0.068	26.627	0.000	0.460	2.174
	NCLBA of 2001	0.040	12.017	0.000	0.268	3.727
	Funding	-0.066	-20.017	0.000	0.276	3.617
	Discussion Group	-0.030	-10.024	0.000	0.348	2.873
	Oral Assessments	0.069	28.193	0.000	0.508	1.969
a	Dependent Variable: Final Letter Grade					

Looking at the results of regression analysis more closely with standardized beta coefficients in Table 18, it can be seen that the GPA of the student explains most of the variance found in this model (.318), followed by race (-.073), the presence of oral assessments (.069), the presence of monthly phone calls (.068), the change in funding (-.066), the NCLBA of 2001 (.040), the gender (.032), the presence of discussion group postings (-.030), and finally, implementation of the pace chart (.025). All of the independent variables in this model were found to be statistically significant and met collinearity requirements.

One of the most revealing statistics derived from regression analysis is the  $r^2$  value which indicates “how much of the variance in the dependent variable...is explained by the model” (Pallant, 2005, p. 152). The  $r^2$  value in Table 19 is .11 which indicates that the explanatory power of the independent variables in this study is 11%. In other words, 89% of the

variance in the student’s final letter grade at FLVS during the study period is due to something other than the independent variables in this model.

Table 19. R<sup>2</sup> Value of Modified Regression Model on Final Letter Grade

**Model Summary(b)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.332(a)	.110	.110	1.438

a Predictors: (Constant), Oral Assessments, Gender, Pace Chart, Race, GPA, Monthly Phone Calls, Funding, Discussion Group, NCLBA of 2001

b Dependent Variable: Final Letter Grade

It is clear that there are other factors contributing to the variance in the student’s final letter grade at FLVS; however, these findings are important so as to generate additional questions as to why there is so much variance in student success at FLVS.

As indicated and supported in the literature review, race, gender, and GPA have a statistically significant impact on the student’s final letter grade. Below, please find a detailed analysis of the control variables. The literature indicates that female students perform better academically than male students. At a p-value of .000, ANOVA found that gender had a statistically significant impact on student success at FLVS during the study period. The Eta<sup>2</sup> is .000 (308.616/ 680464.127 ) which indicates that the impact of the independent variable on the dependent variable is due to gender rather than to the sample size. The parameters of the Levene test have not been violated (Table 21). Regression analysis found gender to be statistically significant at a p-value of .000 and a standardized beta coefficient at .032.

Table 20. ANOVA: Gender on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	308.616	1	308.616	132.770	.000
Within Groups	680155.512	292610	2.324		
Total	680464.127	292611			

Table 21. Levene Test: Gender on Final Letter Grade

**Test of Homogeneity of variances**

Final Letter Grade

Levene Statistic	df1	df2	Sig.
35.718	1	292610	.000

As can be seen in Table 22, the percent of female to male students is disproportionate as the female population at FLVS is growing faster than the male population during the study period. According to the literature, female students perform at higher levels than male students; therefore, it can be expected that as the female population increases at FLVS, the GPA of FLVS should also be increasing.

Table 22. Crosstabulation Table of Male and Female Students at FLVS

**Academic Year \* Gender Crosstabulation**

			Gender		Total
			FEMALE	MALE	
Academic Year	1998-1999	Count	608	479	1087
		% within Academic Year	55.9%	44.1%	100.0%
		% within Gender	.4%	.4%	.4%
	1999-2000	Count	1949	1905	3854
		% within Academic Year	50.6%	49.4%	100.0%
		% within Gender	1.1%	1.6%	1.3%
	2000-2001	Count	4814	4024	8838
		% within Academic Year	54.5%	45.5%	100.0%
		% within Gender	2.8%	3.3%	3.0%
	2001-2002	Count	6682	4845	11527
		% within Academic Year	58.0%	42.0%	100.0%
		% within Gender	3.9%	4.0%	3.9%
	2002-2003	Count	8017	5416	13433
		% within Academic Year	59.7%	40.3%	100.0%
		% within Gender	4.7%	4.5%	4.6%
	2003-2004	Count	18075	12114	30189
		% within Academic Year	59.9%	40.1%	100.0%
		% within Gender	10.5%	10.1%	10.3%
	2004-2005	Count	27865	18936	46801
		% within Academic Year	59.5%	40.5%	100.0%
		% within Gender	16.2%	15.7%	16.0%
	2005-2006	Count	39188	26959	66147
		% within Academic Year	59.2%	40.8%	100.0%
		% within Gender	22.7%	22.4%	22.6%
	2006-2007	Count	65119	45617	110736
		% within Academic Year	58.8%	41.2%	100.0%
		% within Gender	37.8%	37.9%	37.8%
Total		Count	172317	120295	292612
		% within Academic Year	58.9%	41.1%	100.0%
		% within Gender	100.0%	100.0%	100.0%

In Table 23, the GPA and the percent increase in the female population can easily be compared; it can be seen that, as a general rule, the literature is correct; as the percent of female students increases, the GPA of FLVS increases. For the purpose of this analysis, the percent

change in school GPA compared with the percent change in female demographics is analyzed.

An analysis of Table 23 shows that, overall, the performance of FLVS students is consistent with the literature, with the exception of the 1999-2000 school year in which the male population increased 5% and the GPA of the school increased 19%. In the last four years of the study period, the percent of the female population did not change substantially, yet the GPA of the school decreased the last four years of the study period. It is clear that there are other factors are contributing to the increases and decreases discovered in the GPA for the school other than the proportion of female to male students at FLVS. It is also concluded that the percent change in GPA is due to a factor other than gender and some of the variance in the mean of student success can be contributed to policy changes.

Table 23. Percent Comparison of Female and Male Students with Percent Change in School GPA

Academic Year	Mean (GPA), FLVS	% Change in GPA	% Female	% Male	% Change in Female
1997-1998	0	N/A			
1998-1999	1.92	N/A	55.90%	44.10%	Baseline
1999-2000	2.28	19%	50.60%	49.40%	-5%
2000-2001	2.59	14%	54.50%	45.50%	4%
2001-2002	2.97	15%	58.00%	42.00%	3%
2002-2003	3.20	8%	59.70%	40.30%	2%
2003-2004	2.86	-11%	59.90%	40.10%	0%
2004-2005	2.72	-5%	59.50%	40.50%	0%
2005-2006	2.8	3%	59.20%	40.80%	0%
2006-2007	2.59	-8%	58.80%	41.20%	0%

The literature also indicates that non-minority students perform better academically than minority students. Interestingly, there is a significantly disproportionate representation of



minority to non-minority students at FLVS. This disproportion increases in the first few years of the study period with a consistently slight decrease in the disproportion in the last six years of the study period.

Table 24. Crosstabulation of Minority and White Non-Hispanic Students at FLVS

**Academic Year \* Race Crosstabulation**

			Race		Total
			WHITE NON- HISPANIC	MINORITY	
Academic Year	1998-1999	Count	860	227	1087
		% within Academic Year	79.1%	20.9%	100.0%
		% within Race	.4%	.3%	.4%
	1999-2000	Count	3297	557	3854
		% within Academic Year	85.5%	14.5%	100.0%
		% within Race	1.6%	.6%	1.3%
	2000-2001	Count	7198	1640	8838
		% within Academic Year	81.4%	18.6%	100.0%
		% within Race	3.5%	1.9%	3.0%
	2001-2002	Count	9215	2312	11527
		% within Academic Year	79.9%	20.1%	100.0%
		% within Race	4.5%	2.7%	3.9%
	2002-2003	Count	10257	3176	13433
		% within Academic Year	76.4%	23.6%	100.0%
		% within Race	5.0%	3.7%	4.6%
	2003-2004	Count	21981	8208	30189
		% within Academic Year	72.8%	27.2%	100.0%
		% within Race	10.7%	9.5%	10.3%
	2004-2005	Count	32919	13882	46801
		% within Academic Year	70.3%	29.7%	100.0%
		% within Race	16.0%	16.1%	16.0%
	2005-2006	Count	45822	20325	66147
		% within Academic Year	69.3%	30.7%	100.0%
		% within Race	22.2%	23.5%	22.6%
2006-2007	Count	74603	36133	110736	
	% within Academic Year	67.4%	32.6%	100.0%	
	% within Race	36.2%	41.8%	37.8%	
Total	Count	206152	86460	292612	
	% within Academic Year	70.5%	29.5%	100.0%	
	% within Race	100.0%	100.0%	100.0%	

As seen in Table 25, the p-value of .000 (ANOVA) is evidence that race has a statistically significant impact on a student's final letter grade in the secondary online education environment. In Table 26, it can be seen that the Levene's homogeneity of variance statistic is acceptable at 2804.718, which above .05. The Eta<sup>2</sup> is .008 (5498.849/680464.127) which indicates that that the statistical significance detected in the analysis is attributed to race rather than the sample size.

Table 25. ANOVA: Race on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5498.849	1	5498.849	2383.853	.000
Within Groups	674965.278	292610	2.307		
Total	680464.127	292611			

Table 26. Levene Test: Race on Final Letter Grade

**Test of Homogeneity of variances**

Final Letter Grade

Levene Statistic	df1	df2	Sig.
2804.718	1	292610	.000

In terms of contribution to variance in the student's final letter grade, regression analysis (Table 28) found that gender contributed .032 (7<sup>th</sup> highest explanatory power of 9 variables) while race had the second highest standardized beta coefficient of -.073, indicating that the presence of minorities contributes to a decrease in the school's GPA overall (Table 27), and the presence of females very slightly contributes to an increase in the school's GPA overall; gender

is statistically significant at a p-value of .000, and race is statistically significant with a p-value of .000. Both variables have acceptable collinearity statistics.

In Table 27, it can be seen that the results of student success are consistent with the literature for 1999-2000, 2003-2004, 2004-2005, and 2006-2007; as the percent of White Non-Hispanic students changes, the percent change in the GPA is positively correlated. However, the data is not consistent with the literature for the 2000-2001, 2001-2002, 2002-2003, and 2005-2006 school years. It is suggested that the disproportionate amount of minorities to non-minorities results in an impact that is not seen as clearly on the aggregate as it is on the individual level. In other words, the statistical significance and explanatory power of the variable may directly impact the final letter grade of individual rather than the overall GPA of the school.

Table 27. Percent Comparison of White Non-Hispanic and Minority with Percent Change in School GPA

Academic Year	Mean (GPA), FLVS	Change in GPA	% White Non-Hispanic	% Minority	% Change in White Non-Hispanic
1997-1998	0	N/A			
1998-1999	1.92	N/A	79.10%	20.90%	Baseline
1999-2000	2.28	19%	85.50%	14.50%	6%
2000-2001	2.59	14%	81.40%	18.60%	-4%
2001-2002	2.97	15%	79.90%	20.10%	-1%
2002-2003	3.20	8%	76.40%	23.60%	-4%
2003-2004	2.86	-11%	72.80%	27.20%	-4%
2004-2005	2.72	-5%	70.30%	29.70%	-3%
2005-2006	2.8	3%	69.30%	30.70%	-1%
2006-2007	2.59	-8%	67.40%	32.60%	-2%

Table 28. Regression: Gender and Race on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.182	0.000		
	GENDER	0.032	18.924	0.000	0.973	1.028
	RACE	-0.073	-41.006	0.000	0.966	1.035
a	Dependent Variable: FLG					

### *GPA*

The literature indicates that the GPA of the student prior to enrollment in a class has an impact on student success; students with a higher GPA are more likely to be successful in future coursework. ANOVA found the impact of GPA on student success to be statistically significant at a p-value of .000 (Levene Test: 1029.42; Eta<sup>2</sup>: 0.173 at 117508.995/680418.35). Regression analysis found that the student’s GPA has the most explanatory power in determining the reason for changes in the student’s final letter at a standardized beta coefficient of .318. It is clear that the student’s GPA prior to enrollment in an FLVS course is an important predictor of student success in the secondary online education environment.

### *Policy Analysis*

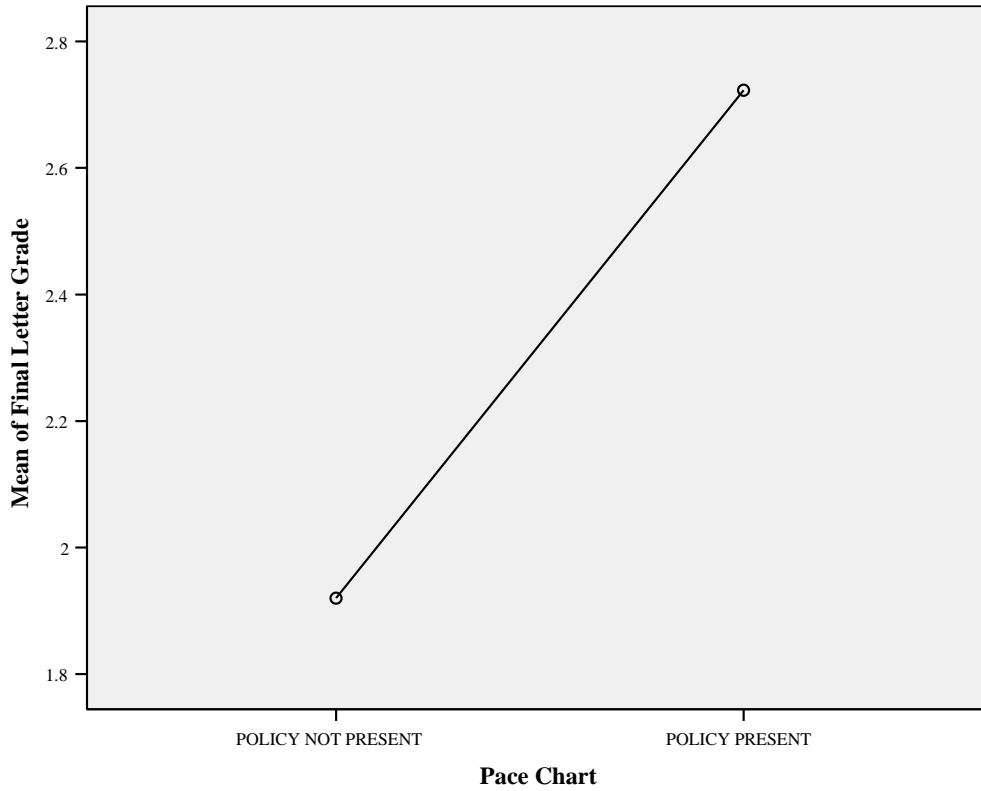
The proceeding analysis will include reference to Kearsley’s Theory of Engagement (2000) and includes a discussion of the policies in the study individually. As a reminder, Kearsley’s Theory of Engagement (2000) states that there are three components to success in online learning: Relate, Create, and Donate. None of the policies at FLVS fall under the Create component of Kearsley’s theory which states that project-based assignments will result in student

success in the online classroom. Donate and Relate are the other two components of his theory. For the purpose of this study, the 28-day grace period, the pace chart, the NCLBA of 2001, and the funding change fall under Kearsley's Donate component which means that there is outside pressure for the student to successfully complete the class. Relate means that as the student has interaction with other students and their teachers, the student is more likely to be successful because he or she has a relationship with the teacher and therefore will take more ownership of their education had the interaction not taken place. In this study, oral assessments, discussion group postings, and monthly phone calls are classified as the Relate component of Kearsley's theory.

In 1998-1999, FLVS implemented their 28-day grace period which survey respondents classified as a mimetic policy; in terms of Kearsley's theory, the 28-day grace period fulfill the Donate component in that the policy is an external force driving the students to complete their work. A majority of the survey respondents strongly agreed or agreed (9%, 32.1%, respectively) that the 28-day grace period ensure student success in the online environment. In that this academic year serves as baseline data, it is unclear as to the impact that this policy had on student success in subsequent years; however, the trend of an increasing GPA at FLVS for the first four years of the study period enables the researcher to conclude that the 28-day grace period does promote student success in the secondary online education learning environment. In that this policy was present throughout the study period, ANOVA and regression analysis were not necessary to perform.

Next, the pace chart (mimetic policy) was implemented in the 1999-2000 academic year in which the school's GPA increased 19%; this policy also falls under Kearsley's Donate component in that the pace chart guides the student's submitted work per week. A majority of the survey respondents strongly agreed or agreed that pace charts ensure student success at 12.8% strongly agree and 26.3% agree. The opinion of the survey respondents is consistent with the findings of the data analysis in that the GPA of the school increased 19% when this policy was implemented at FLVS. In 2000-2001, no additional policies were implemented at FLVS yet the GPA of the school increased 14%. In Table 29, please review the line graph of the increase in the student's final letter grade as it relates to the presence of this policy.

Table 29. Line Graph: Pace Chart Present/Not Present on Mean of Final Letter Grade



ANOVA found that the implementation of pace charts had a statistically significant impact on the change in the mean over the study period (Table 30) with a p-value of .000, a Levene's Homogeneity of variance at 228.656, and an  $\text{Eta}^2$  of .001 at 697.965/680464.127. Regression analysis found a standardized beta coefficient of .025 and was deemed to be statistically significant at a p-value .000; collinearity statistics are acceptable (Table 31).



Table 30. ANOVA: Pace Chart on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	697.965	1	697.965	300.444	.000
Within Groups	679766.163	292610	2.323		
Total	680464.127	292611			

Table 31. Regression: Pace Chart on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.182	0.000		
	PACECHART	0.025	13.811	0.000	0.924	1.097
a	Dependent Variable: FLG					

In 2001-2002, FLVS implemented monthly phone calls and the GPA of the school increased 15%. Survey respondents classified monthly phone calls as a mimetic policy and this policy falls under Kearsley’s Relate component of his theory. Kearsley’s Theory of Engagement (2000) states that students that have a relationship (Relate) and/or interaction with their teachers will be more inclined to experience success in an online class, and this is reflected in the data for the 2001-2002 school year. Survey respondents overwhelmingly agree that monthly phone calls increase interaction between students and teachers (61.5% strongly agree; 24.4% agree); therefore, it can be concluded that Kearsley’s Theory of Engagement (2000) is again confirmed regarding the Relate component of his theory. As can be seen in Table 32, the student’s final letter grade increased when monthly phone calls were implemented. ANOVA found that the

presence of monthly phone calls had a statistically significant (p-value of .000) impact on the student's final letter grade (Table 33). The Levene Test of Homogeneity of variance is acceptable at 953.527, and the effect size is .002 at 1047.677/680464.127. Regression analysis (Table 34) found that the presence of monthly phone calls had a statistically significant impact on the student's final letter grade with a p-value of .000 and a standardized beta coefficient of .048, or the fourth most powerful explanatory variable in the study.

Table 32. Line Graph: Monthly Phone Calls Present/Not Present on Mean of Final Letter Grade

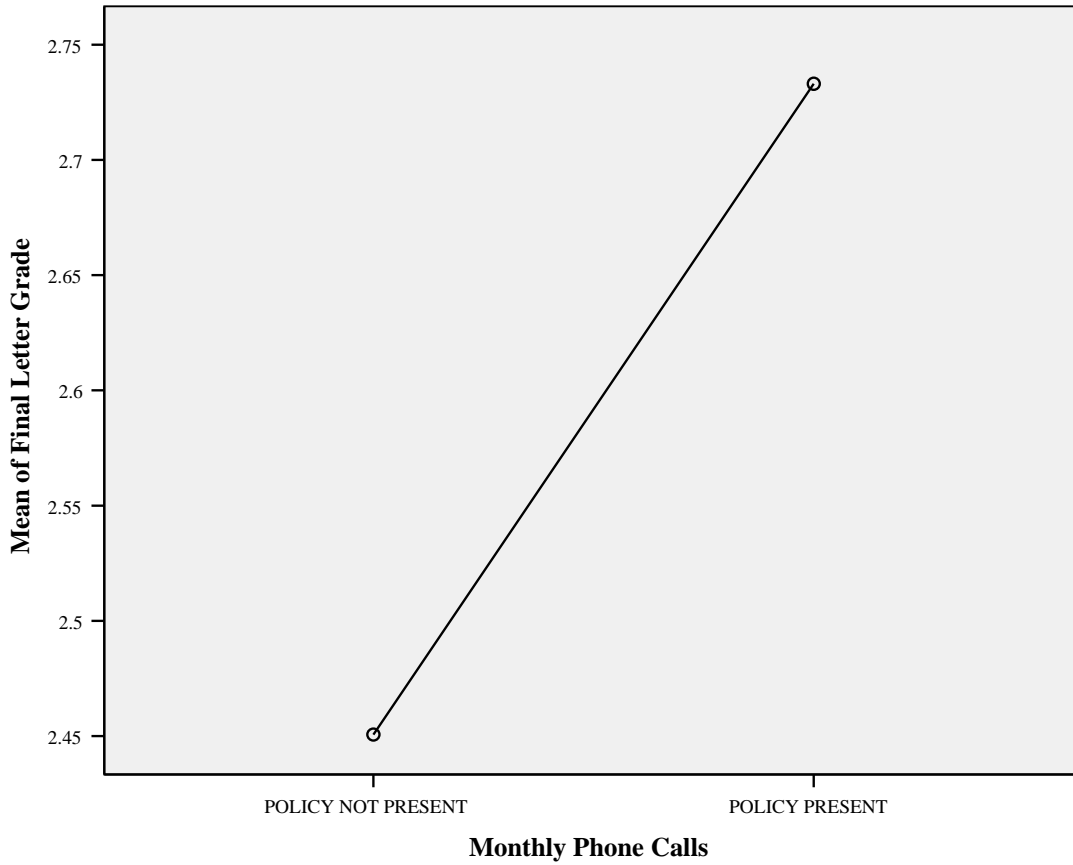


Table 33. ANOVA: Monthly Phone Calls on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1047.677	1	1047.677	451.212	.000
Within Groups	679416.450	292610	2.322		
Total	680464.127	292611			

Table 34. Regression analysis: Monthly Phone Call on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.182	0.000		
	Monthly Phone Call	0.068	26.627	0.000	0.460	2.174
a	Dependent Variable: FLG					

In 2002-2003, the NCLBA of 2001 was implemented. This is the first coercive policy, according to survey respondents, that was introduced to FLVS. Although survey respondents did not agree that the NCLBA of 2001 ensures student success (37.2% disagree; 13.5% strongly disagree), the GPA for this academic year and Kearsley’s Donate component indicate that student success should increase with the implementation of this type of policy. The GPA of FLVS increased 8% this year. The events of the subsequent years; however, indicate that the NCLBA of 2001 does not provide consistent increases in student success over time as the GPA of the school begins to consistently decrease in subsequent years. In addition, it is possible that the compounded effect of three mimetic policies in 2002-2003 had an impact on increasing the school’s GPA as well, not just the implementation of the NCLBA of 2001. ANOVA found that the NCLBA had a statistically significant impact on the student’s final letter grade, with regression analysis supporting the findings with a p-value of .001 (Table 35); Levene’s Homogeneity of variance Test is acceptable at 262.285; the Eta<sup>2</sup> is 4.08 (27.747/680464.127) which is relatively large. A larger effect size indicates that the detected statistical significance may be from the sample size rather than the intervention. Regression analysis found that the

presence of the NCLBA resulted in a standardized beta coefficient of .040; collinearity statistics are acceptable.

Table 35. ANOVA: No Child Left Behind Act on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27.747	1	27.747	11.932	.001
Within Groups	680436.380	292610	2.325		
Total	680464.127	292611			

Table 36. Line Graph: No Child Left Behind Act Present/Not Present on Mean of Final Letter Grade

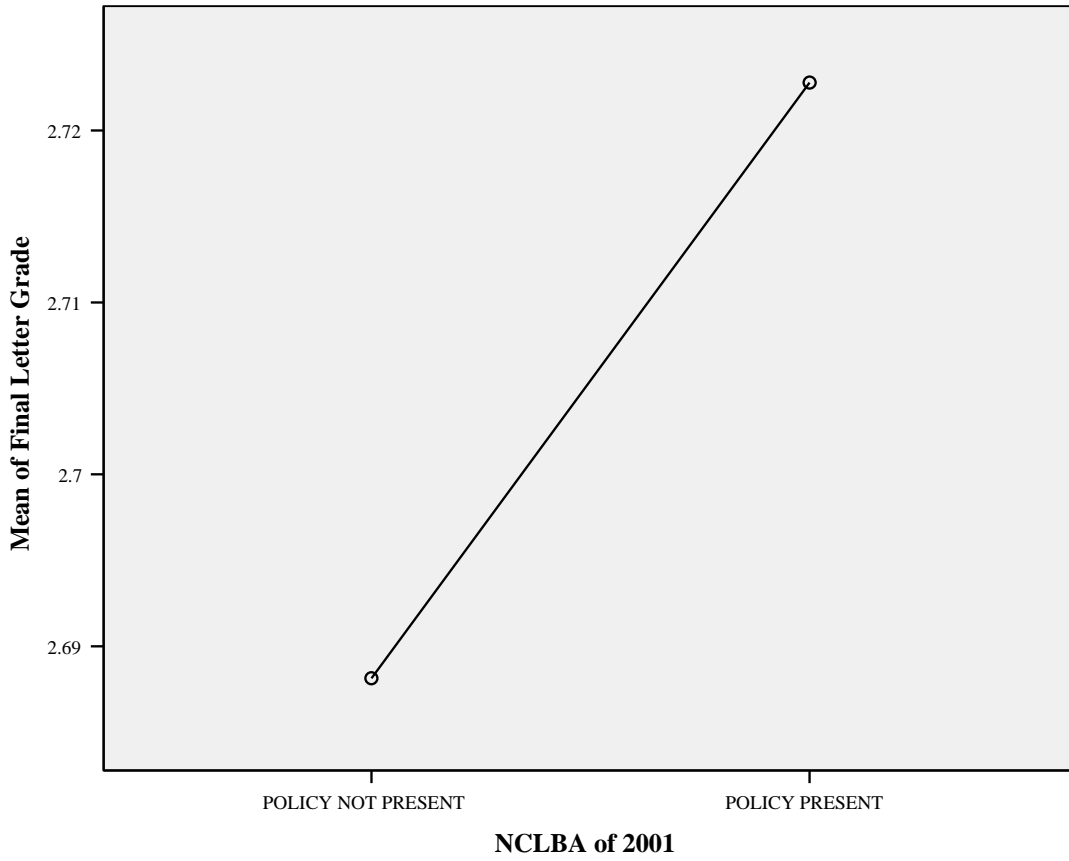


Table 37. Regression: No Child Left Behind Act on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.182	0.000		
	NCLBA	0.040	12.017	0.000	0.268	3.727
a	Dependent Variable: FLG					

Another coercive policy (according to survey respondents) was implemented in the 2003-2004 academic year. The state of Florida changed the funding model from a line-item allocation to a performance based pay (FTE model) in which FLVS was reimbursed only when students successfully completed a course, or received a final letter grade of A, B, C, or D. Final grades of an F do not receive funding under this model. Interestingly, the GPA of the school decreased 11% this year, which leads to the following preliminary conclusions: 1) the academic standards decreased, resulting in lower grades in an attempt to receive funding even if the student's final letter grade was not as high as had been expected in the past; 2) more students were withdrawn with a failing grade (which would decrease the GPA of the school overall) that were not working in the class and were therefore were a potential revenue loss for the organization; and 3) coercive policies are not effective in the secondary online education environment. A majority of survey respondents were neutral on the impact of the change in funding on student success (43.6% neither agree nor disagree), but of those that had an opinion, most disagreed or strongly disagreed (24.4%, 3.2%, respectively) that the funding change would ensure that students are successful, despite Kearsley's Donate component of his theory. Kearsley's Donate component

may not be as effective with this particular policy change as it does not directly impact the students or change the requirements for completing the course from the student's perspective. The line graph in Table 38 reveals how the student's final letter grade (or the school's GPA) decreased after the implementation of the change in funding. ANOVA found that the impact of the change in funding on the student's final letter grade was statistically significant with a p-value of .000 (Table 39); Levene's Test is acceptable at 272.449, and the Eta<sup>2</sup> is acceptable at .001 (962.673/680464.127). Regression analysis resulted in a standardized beta coefficient of -.066 and a p-value of .000; collinearity statistics are acceptable for this variable. In terms of explanatory power, funding is number five of nine variables.



Table 38. Line Graph: Change in Funding Present/Not Present on Mean of Final Letter Grade

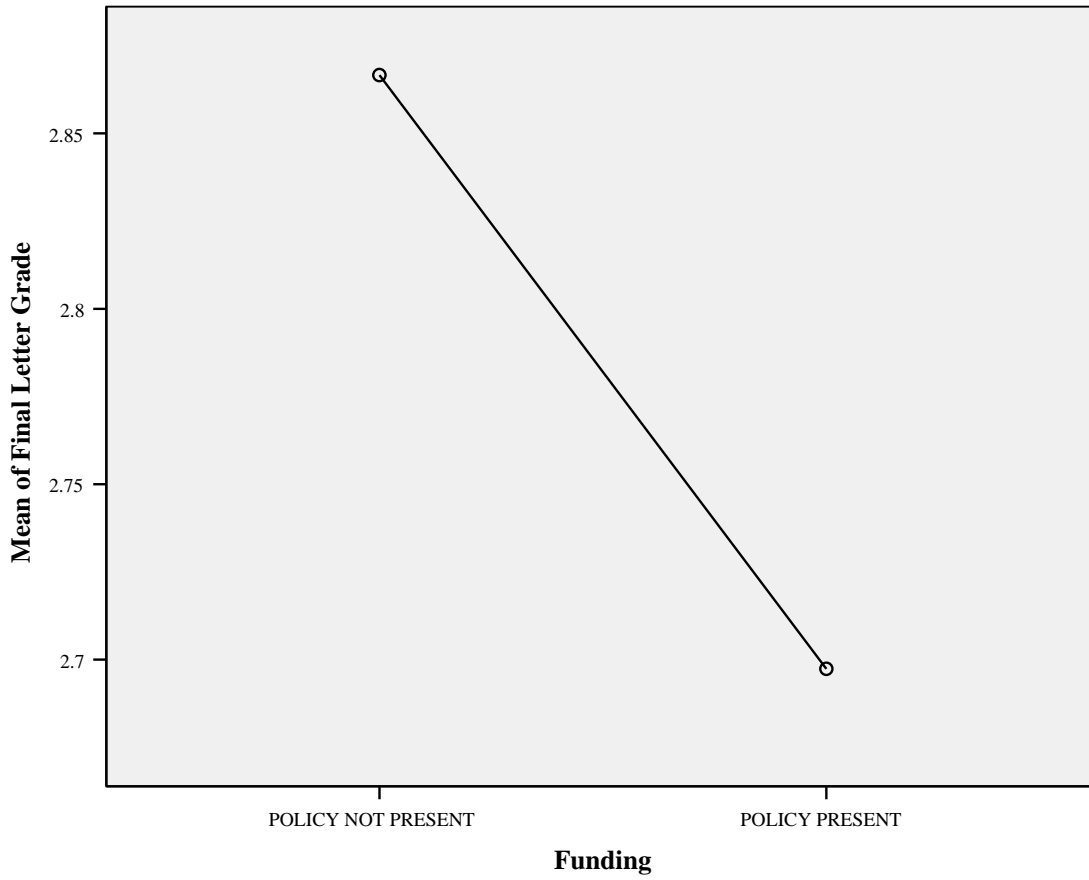


Table 39. ANOVA: Funding on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	962.673	1	962.673	414.551	.000
Within Groups	679501.454	292610	2.322		
Total	680464.127	292611			

It can also be speculated that the number of students receiving a “D” as a final letter grade increased after the change in funding in 2003-2004; however, the data in Table 40 shows that the percent of students receiving a “D” in 2003-2004 and subsequent years remains relatively the same. There is a notable increase in the percent of students receiving an “F” in this and subsequent years, an indication that students that are not working in the courses are withdrawn so as to enable space for students that will work, or generate revenue.

Table 40. Percent of Final Letter Grade Throughout Study Period

**Academic Year \* Final Letter Grade Crosstabulation**

			Final Letter Grade					Total
			F	D	C	B	A	
Academic Year	1998-1999	Count	450	42	74	187	334	1087
		% within Academic Year	41.4%	3.9%	6.8%	17.2%	30.7%	100.0%
	1999-2000	Count	1186	132	373	757	1406	3854
		% within Academic Year	30.8%	3.4%	9.7%	19.6%	36.5%	100.0%
	2000-2001	Count	2097	208	892	1649	3992	8838
		% within Academic Year	23.7%	2.4%	10.1%	18.7%	45.2%	100.0%
	2001-2002	Count	1652	314	1067	2165	6329	11527
		% within Academic Year	14.3%	2.7%	9.3%	18.8%	54.9%	100.0%
	2002-2003	Count	1083	389	1206	2797	7958	13433
		% within Academic Year	8.1%	2.9%	9.0%	20.8%	59.2%	100.0%
	2003-2004	Count	5251	662	2603	6195	15478	30189
		% within Academic Year	17.4%	2.2%	8.6%	20.5%	51.3%	100.0%
	2004-2005	Count	9753	988	4028	9938	22094	46801
		% within Academic Year	20.8%	2.1%	8.6%	21.2%	47.2%	100.0%
	2005-2006	Count	11286	1722	6820	15706	30613	66147
		% within Academic Year	17.1%	2.6%	10.3%	23.7%	46.3%	100.0%
	2006-2007	Count	24039	3142	12075	26951	44529	110736
		% within Academic Year	21.7%	2.8%	10.9%	24.3%	40.2%	100.0%
Total		Count	56797	7599	29138	66345	132733	292612
		% within Academic Year	19.4%	2.6%	10.0%	22.7%	45.4%	100.0%

Next, the introduction of discussion group postings in 2004-2005, a mimetic policy, did not increase the school's GPA. In that discussion group postings fall under Kearsley's Relate component of his theory, one would expect that the introduction of discussion group postings would increase student success in the online environment; however, it is clear that discussion group postings have not contributed to student success at FLVS. This can be explained, in part,

because survey respondents indicated that discussion group postings do not increase interaction between students and teachers in practice even though, in theory, they are supposed to increase interaction. According to the respondents of the survey administered to FLVS, a slight majority do not agree that participation in discussion group postings increases interaction between students and teachers (29.5% disagree vs. 26.3 agree), a key relationship in student success in online learning, according to Kearsley's Theory of Engagement (2000). The GPA of the school decreased 5% in 2004-2005 even though a new mimetic policy was implemented. During this academic year, the compounded types of policies were 4 mimetic and 2 coercive policies. In that the survey respondents felt that discussion group postings did not increase interaction with the teachers, it can be concluded that, 1) discussion group postings are not effective in building relationships with students; therefore, classification of discussion group postings as a mimetic policy is void in that survey respondents deemed the policy ineffective in increasing interaction with teachers; and 2) the compounded impact of 2 coercive policies for 2 consecutive academic years appears to have had a negative impact on the school's GPA. ANOVA found that the presence of this policy had a statistically significant impact on the student's final letter grade with a p-value of .000 (Table 41); Levene's test is acceptable at 508.18, and the  $\eta^2$  is acceptable at .003 (1877.254/680464.127). It is clear from Table 42 that the presence of discussion group postings has a negative impact on the student's final letter grade. This is supported with regression analysis which found that the presence of discussion group postings contributed to the variance detected in the student's final letter grade at with a standardized beta coefficient of -.030 and a p-value of .000; collinearity statistics are acceptable for this variable (Table 43).

Table 41. ANOVA: Discussion Group Postings on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1877.254	1	1877.254	809.481	.000
Within Groups	678586.873	292610	2.319		
Total	680464.127	292611			

Table 42. Line Graph: Discussion Groups Present/Not Present on the Mean of Final Letter Grade

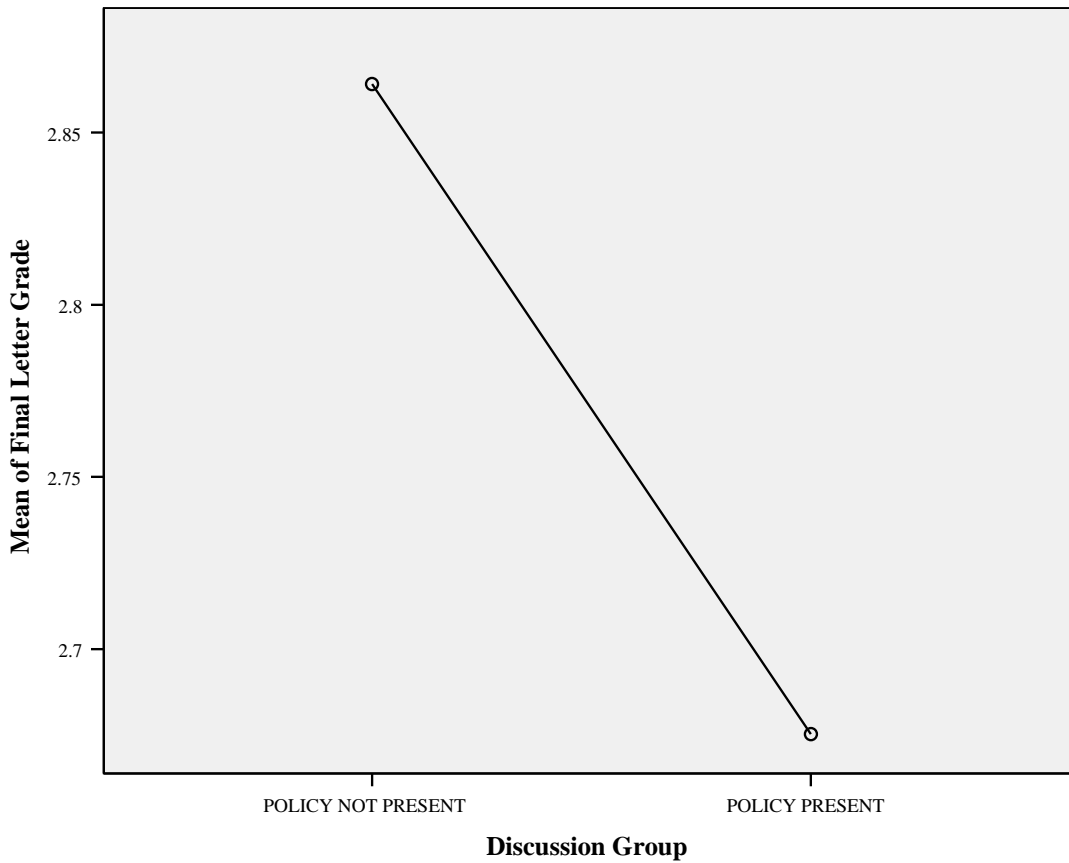


Table 43. Regression: Discussion Group Postings on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.182	0		
	DISCGRP	-0.03	-10.024	0	0.348	2.873
a	Dependent Variable: FLG					

In 2005-2006, the introduction of oral assessments (mimetic policy) resulted in a slight increase in the school’s GPA of 3%; although the increase is not substantial, it appears as though the introduction of another mimetic policy slightly increased the school’s GPA. Survey respondents indicated strong agreement that oral assessments increase interaction between students and teachers (65.4% strongly agree; 23.1% agree) and ensure that students will be successful in the class (20.5% strongly agree; 42.9% agree) which confirms Kearsley’s Relate component on student success in online learning, and is reflected in the GPA increase of FLVS for the 2005-2006 school year. In 2006-2007, no changes in policy were made, and the school’s GPA decreased 8% from 2.8 to 2.59; it is possible that the GPA decreased in 2006-2007 because no additional mimetic policies were introduced in the organization and the impact of two coercive policies in effect continued to decrease the school’s GPA. ANOVA found that the presence of oral assessments had a statistically significant impact on the change in the students final letter grade (Table 44); Levene’s test is acceptable at 85.289 and the Eta<sup>2</sup> is acceptable at .002 (1398.411/680464.127). Regression analysis found a standardized beta coefficient of .069

and a p-value of .000; collinearity statistics are acceptable (Table 45). The presence of oral assessments is the third most powerful explanatory variable in this model.

Table 44. ANOVA: Oral Assessments on Final Letter Grade

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1398.411	1	1398.411	602.577	.000
Within Groups	679065.716	292610	2.321		
Total	680464.127	292611			

Table 45. Regression: Oral Assessments on Final Letter Grade

Coefficients(a)						
Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		17.182	0.000		
	OA	0.069	28.193	0.000	0.508	1.969
a	Dependent Variable: FLG					

The introduction of mimetic policies that increase interaction between students and teachers and/or ensure student success in secondary online education result in increased student success as measured by the school's GPA. The only exception is the introduction of discussion group postings in 2004-2005 as a mimetic policy; yet survey respondents indicated that the application of discussion group postings does not genuinely increase interaction with the student and the teacher, therefore, relationships are not built through the mechanism of discussion group postings. Other mimetic polices like monthly phone calls and oral assessments result in

increased interaction between the students and teachers which, in turn, builds relationships and results in a school-wide increase in the GPA. It is clear that as the number of coercive policies increases, the GPA of the school decreases overall. Although there is an increase in the school's GPA when the first coercive policy (NCLBA) was introduced, the pattern of decreasing student success is evident and the GPA does not increase until an effective mimetic policy is introduced in 2005-2006. Unfortunately, none of the policies that have been implemented at FLVS were classified as normative (as defined in institutional theory), or fall under Kearsley's Create component; therefore, no conclusions can be drawn at this point about the effectiveness of normative policy or the impact of Kearsley's Create component on student success in secondary online education.

### *Non-completions*

One aspect of FLVS that is not frequently discussed is the number of students that are withdrawn from an FLVS either voluntarily or involuntarily; other students enroll in a FLVS course yet are never activated into a class. This aspect of FLVS needs to be discussed, particularly in light of the change in the funding model from a line-item allocation to the FTE model which is based on pay-for-performance. Florida Virtual School does not receive payment for students that have the following enrollment status: course request incomplete, withdrawn/no grade, never activated, or never assigned. They also do not receive payment for students that are withdrawn/failing or complete/failing; however, those enrollment types were included in the previous analysis in terms of the school GPA and are not relevant to this portion of the analysis regarding non-completions. Hypothesis 7 states that the number of non-completions should be decreasing as the number of policies at FLVS increases; in that the policies that have been



implemented are designed to promote student success, student attrition rates should be dropping. In order to test H<sub>7</sub>, the researcher used descriptive statistics to analyze patterns of non-completion at FLVS. In Table 46 it can be seen that the number of non-completions at FLVS is growing substantially throughout the study period and that the change in the mean is statistically significant at a p-value of .000 (Table 47) and Eta<sup>2</sup> of .031 (25074.173/809760.797) which indicates that the change in the mean is due to the academic year rather than the sample size. The Levene test is acceptable at 1725.323. Further analysis needs to take place to determine whether the number of non-completions are proportionate to the number of total enrollment at FLVS throughout the study period. Please refer to Table 48 which compares the number of completions, non-completions, total enrollment, and percent increase in non-completions when taking into account the growing enrollment at FLVS.

Table 46. Total Number of Non-completions

**Academic Year \* Final Letter Grade Crosstabulation**

			Final Letter Grade				Total
			COURSE REQUEST INCOMPL ETE	NEVER ACTIVAT ED	NEVER ASSIGNED	WITHDRAW N/NO GRADE	
Academic Year	1998-1999	Count	0	0	0	269	269
		% within Academic Year	.0%	.0%	.0%	100.0%	100.0%
	1999-2000	Count	0	1	0	737	738
		% within Academic Year	.0%	.1%	.0%	99.9%	100.0%
	2000-2001	Count	19	0	1	1632	1652
		% within Academic Year	1.2%	.0%	.1%	98.8%	100.0%
	2001-2002	Count	14	53	4	2263	2334
		% within Academic Year	.6%	2.3%	.2%	97.0%	100.0%
	2002-2003	Count	13302	5182	2192	6924	27600
		% within Academic Year	48.2%	18.8%	7.9%	25.1%	100.0%
	2003-2004	Count	33446	13123	6432	12483	65484
		% within Academic Year	51.1%	20.0%	9.8%	19.1%	100.0%
	2004-2005	Count	68691	25607	5757	18045	118100
		% within Academic Year	58.2%	21.7%	4.9%	15.3%	100.0%
	2005-2006	Count	79816	49439	27282	23767	180304
		% within Academic Year	44.3%	27.4%	15.1%	13.2%	100.0%
	2006-2007	Count	112367	80411	29762	41709	264249
		% within Academic Year	42.5%	30.4%	11.3%	15.8%	100.0%
Total		Count	307655	173816	71430	107829	660730
		% within Academic Year	46.6%	26.3%	10.8%	16.3%	100.0%

Table 47. ANOVA: Non-Completions on Mean

**ANOVA**

Final Letter Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25074.173	8	3134.272	2639.116	.000
Within Groups	784686.623	660721	1.188		
Total	809760.797	660729			

Table 48. Completions, Non-completions, Total Enrollment, and % Non-completions of Total Enrollment

Academic Year	# of Completions	# of Non-completions	Total Enrollment	% Non-completions of Total Enrollment
1998-1999	1,087.00	269.00	1,356.00	19.84%
1999-2000	3,854.00	738.00	4,592.00	16.07%
2000-2001	8,838.00	1,652.00	10,490.00	15.75%
2001-2002	11,527.00	2,334.00	13,861.00	16.84%
2002-2003	13,433.00	27,600.00	41,033.00	67.26%
2003-2004	30,189.00	65,484.00	95,673.00	68.45%
2004-2005	46,801.00	118,100.00	164,901.00	71.62%
2005-2006	66,147.00	180,304.00	246,451.00	73.16%
2006-2007	110,736.00	264,249.00	374,985.00	70.47%
TOTAL	292,612.00	660,730.00	953,342.00	69.31%

As can be seen, there is a significant increase in the percent of non-completions to total enrollment starting in 2002-2003, which steadily increases and begins to stabilize in 2004-2005 around 70% of the enrollments at FLVS resulting in non-completion. The total number of

completions for FLVS during the study period is 292,612; the total number of non-completions for FLVS during the study period is 660,730, or 69.31% of the enrollments at FLVS resulting in non-completions during the study period. In 2002-2003, the first coercive policy was introduced to FLVS; while the GPA of the school was at its highest during that school year, the GPA of the school began to decline rapidly after the implementation of the second coercive policy in 2003-2004. The findings in this analysis indicate that coercive policies seem to have a detrimental impact on student success in secondary online education as indicated in the increased number of non-completions once coercive policies are introduced in the organization.

Next, the researcher analyzed the types of non-completions and determined the percent of enrollments per academic year. Please refer to Table 49 for a breakdown of the types and number of non-completions at FLVS during the study period.

Table 49. Types of Non-completions

Academic Year	Course Request Incomplete	% of Academic Year Total	Never Activated	% of Academic Year Total	Never Assigned	% of Academic Year Total	Withdrawn/ No Grade	% of Academic Year Total	Total Non-completions this Academic Year
1998-1000	0	0%	0	0%	0	0%	269	100%	269
1999-2000	0	0%	0	0%	0	0%	737	100%	738
2000-2001	19	1%	0	0%	1	0%	1632	99%	1652
2001-2002	14	1%	53	0%	4	0%	2263	97%	2334
2002-2003	13302	48%	5182	19%	2192	8%	6924	25%	27600
2003-2004	33446	51%	13123	20%	6432	10%	12483	19%	65484
2004-2005	68691	58%	25607	22%	5757	5%	18045	15%	118100
2005-2006	79816	44%	49439	27%	27282	15%	23767	13%	180304
2006-2007	112367	43%	80411	30%	29762	11%	41709	16%	264249
<b>TOTAL</b>	<b>307655</b>	<b>47%</b>	<b>173815</b>	<b>26%</b>	<b>71430</b>	<b>11%</b>	<b>107829</b>	<b>16%</b>	<b>660730</b>

A majority of the non-completions are incomplete course requests (47%), followed by never activated (30%), withdrawn/no grade (16%), and never assigned (11%) enrollments. Incomplete course requests occur when the enrollment process is not completed for some reason. Possible reasons for a course request incomplete enrollment include the absence of guardian approval, guidance counselor approval, or student approval when registering for a course. Never assigned enrollments occur when the course request application is complete and the student is waiting to be assigned to a teacher. If a student is on the wait-list to be assigned to a teacher, FLVS contacts the student and asks if he or she would like to continue to wait to be assigned to a teacher or if they would like to drop their request for enrollment in a FLVS course. If a student

indicates that they no longer wish to be assigned to a teacher, the enrollment is classified as never assigned. These processes (course request incomplete and never assigned) do require some loss of time costs to the organization overall; however, these processes are not as time-consuming as the other non-completion types and do not require a loss of time cost analysis due to the small amount of manpower associated with these enrollments. Course request incomplete and never assigned enrollments do require the use of software and databases to store the information and can slow down software systems like the Virtual School Administrator (VSA); however, the loss of time cost is minimal. Yet, it is clear that a more efficient system or process needs to be in place in order to decrease the number of frivolous course requests made by the students.

The non-completion enrollments that require a significant portion of a teacher's time are never activated and withdrawn/no grade enrollments and total 42% of the non-completions. If a student is never activated into a FLVS course, this indicates that guidance counselors and enrollment personnel have spent time approving the course request and placing the student with a teacher. Once a student is assigned to a teacher, the teacher of record spends a substantial amount of time trying to contact the student and guardian in order to conduct the welcome call. In some cases, the physical school's guidance counselor is contacted and approximately 2 hours per student (including guidance counselor approval and enrollment personnel) is spent trying to make contact with the student and stakeholders when processing a never activated enrollment.

For most withdrawn/no grade enrollments (meaning the student was withdrawn from the course during the 28-day grace period), the teacher spends approximately four weeks working

with the student in order to encourage him or her to remain in the course. In some cases, the student or guardian will request to be withdrawn from the course; however, a majority of withdrawn/no grade enrollments require a substantial amount of time and effort on the part of the teacher. For a withdrawn/no grade enrollment, the student and guardian completed the welcome call with the teacher of record and were activated into a FLVS course. Once a student is activated into a course, the grace period cut-off date is generated for 28 days after the date of activation. During the first 28 days in which the student is activated in a course, he or she must complete the required amount of work to remain active in the course; the teacher of record monitors the student's progress through weekly tracking of the student's work. Teachers are required to call the student, guardian, and in some cases, the physical school and FLVS guidance department a minimum of two times at every phone number available before a withdrawn/no grade enrollment can be processed. A majority of the withdrawn/no grade enrollments are a result of students not submitting the required amount of work per week as agreed to when they enrolled in the course. There is no repercussion for the student or guardian when he or she withdraws from a FLVS course during the grace period, yet the time spent processing these enrollments is substantial. With the change in funding from a line-item allocation to, essentially, fee-for service funding, revenue has essentially been "lost" to processing enrollments in which the students do not respond to communication (electronic or telephone) and/or they do not comply with the policies and procedures to which they agreed when they signed up for a FLVS course. Clearly, additional accountability and responsibility from the students and guardians needs to be built into the processes of enrollment and activation into FLVS courses.

## **Chapter Summary**

Florida Virtual School offers a great service to residents of Florida; however, it is clear that some changes need to be made in order to maximize efficiency and effectiveness. Florida Virtual School is the leader in secondary online education and is a model for many other online education programs throughout the country. Based on the findings of this study, there are opportunities for improvement at FLVS in the areas of increasing student outcomes and decreasing the number of non-completions. As the data clearly shows, teachers and other personnel spend a substantial amount of time processing non-completions rather than working with students that are producing outcomes. It is the intent of the researcher to help FLVS identify ways in which non-completions become the exception rather than the expectation.



## CHAPTER 6. CONCLUSIONS

### Major Findings and Recommendations

#### *Conclusions of Hypothesis Testing*

H<sub>01</sub>: Coercive policies do not have a statistically significant impact on student success.

H<sub>1</sub>: Coercive policies have an impact on student success that is statistically significant.

Coercive policies do have a statistically significant impact on student success; therefore, we reject the null hypothesis and fail to reject H<sub>1</sub> in that ANOVA found the change in the mean to be statistically significant over the time period studied and regression analysis found the NCLBA to be statistically significant in explaining the variance detected in the student's final letter grade. The coercive policies in this study were both public policy: the NCLBA of 2001 (ANOVA: .000; regression: .000) and the change in funding from a line-item allocation to a FTE model of funding (ANOVA: .000; regression: .000). The year in which the NCLBA of 2001 was implemented, the GPA of FLVS increased 8% was at its highest at 3.20; however, the continued presence of coercive policies at FLVS seems to result in a decrease in the school's GPA over time as the GPA of FLVS decreased 11% when the change in funding was introduced to the organization. Coercive policies do have a statistically significant impact on student success at FLVS.

H<sub>02</sub>: Mimetic policies do not have a statistically significant impact on student success.

H<sub>2</sub>: Mimetic policies have an impact on student success that is statistically significant.

As found in the analysis, mimetic policies do have an impact on student success that is statistically significant as found in the results of ANOVA and regression analysis. Mimetic policies generated the most positive outcomes on the GPA of FLVS throughout the time period studied with the exception of discussion group postings in 2004-2005; however discussion group postings were found to be statistically significant in both ANOVA and regression analysis (p-values of .000 for both ANOVA and regression analysis). According to survey respondents, discussion group postings do not increase interaction with students and teachers at a level that would be expected. Other mimetic policies in this analysis included the pace chart (ANOVA: .000; regression: .000; GPA increased 19% first year and 14% second year), monthly phone calls (ANOVA: .000; regression: .000; GPA increased 15%), and oral assessments (ANOVA: .000; regression: .000; GPA increased 3%), all of which are statistically significant. Therefore, we reject the null hypothesis and fail to reject  $H_2$  as mimetic policies do have an impact on student success that is statistically significant.

$H_{03}$ : Normative policies do not have a statistically significant impact on student success.

$H_3$ : Normative policies have an impact on student success that is statistically significant.

Unfortunately, none of the policies in this study were classified as normative policies by the survey respondents; therefore, we can neither reject nor fail to reject the null hypothesis or  $H_3$ .

H<sub>04</sub>: The influence of coercive policies on student success is not more positive than that of mimetic and normative policies.

H<sub>4</sub>: The influence of coercive policies on student success is more positive than that of mimetic and normative policies.

In this analysis, the results of both ANOVA and regression analysis indicate that mimetic policies have a more positive impact on student success in the secondary online education environment than do coercive policies; therefore, we fail to reject the null hypothesis and reject H<sub>4</sub> in that coercive policies tend to have a more negative impact on student success than a positive impact on student success as anticipated. As a trend, the continued presence of coercive policies in the secondary online education environment appears to decrease the school's GPA while mimetic policies tend to increase the school's GPA overall.

H<sub>05</sub>: The change in funding from a line-item allocation to a pay for performance payment will not increase student success.

H<sub>5</sub>: The change in funding from a line-item allocation to a pay for performance payment will increase student success.

It was expected that the change in funding would change the behavior of teachers and/or administrators in terms of efforts to retain students and receive funding; however, the change in funding resulted in a decrease in the school's GPA of 11%; in the secondary online learning environment, it appears as though coercive policies like the NCLBA of 2001 and the change in funding have an opposite effect and decrease student success, with the exception of the first year

in which the NCLBA was implemented. It is speculated that the GPA may be decreasing at FLVS after the change in funding if teachers are pushing students through the courses in order to generate revenue for the school; this claim was substantiated due to the large increase in student's receiving a failing grade during this and subsequent years. The change in funding means that FLVS is not reimbursed for students that are withdrawn from the class for not working; therefore, the number of students withdrawn from a class with a failing grade may be increasing to make room for students that will work in the courses and generate revenue. Therefore, we fail to reject the null hypothesis and reject  $H_5$  in that the change in funding did not increase student success at FLVS.

$H_{06}$ : The number of policies in a given year is not positively related to the change in student success measures.

$H_6$ : The number of policies in a given year is positively related to the change in student success measures.

It was expected that as the number of policies designed to promote student success increased over the years that the GPA of the school would also increase. This was true for the first five years; however, the last four years of the study period resulted in a consistent decline in the GPA of the school. It appears as though there is a saturation point at which changes in policy result in positive outcomes; or, it is possible that there are other factors contributing to the decrease in the school's GPA that are not detected in this study. Therefore, we fail to reject the null hypothesis and reject  $H_6$  in that as the number of compounded policies increases, the GPA of the school tends to decrease.

H<sub>07</sub>: The number of non-completions at FLVS is not negatively correlated as the number of policies increases.

H<sub>7</sub>: The number of non-completions at FLVS is negatively correlated as the number of policies increase.

It is very clear that the number of non-completions has not decreased during the study period; in fact, the number of non-completions has consistently grown throughout the study period. As a result, we fail to reject the null hypothesis and reject H<sub>7</sub> in that the number of non-completions at FLVS is positively correlated with the number of policies at FLVS rather than negatively correlated as expected.

#### *Discussion of Hypothesis Testing Results*

This study revealed that there is a statistically significant change in the GPA of FLVS during the study period. During the first five years of the study period, the change in the school's GPA was increasing, indicating that student success was improving. During that time period, mimetic policies were introduced to the students and the students were more successful in their classes as a result of the policies. As coercive policies were introduced into the organization, student success began to steadily decline until an effective mimetic policy was implemented. ANOVA found that gender, race, and GPA have a statistically significant impact on student success in the secondary online education environment. The student's GPA and race have the 1<sup>st</sup> and 2<sup>nd</sup> highest standardized beta coefficient in the model, thereby enabling the conclusion that race and GPA are statistically significant and can explain some of the variance in student success in the secondary online education environment.

The results of testing  $H_1$  found that coercive policies do have a statistically significant impact on student success in both ANOVA and regression analysis. Logically, coercive policies should have increased student success in that non-compliance results in sanctions; however, the types of coercive policies at FLVS do not directly impact the student. Rather, the coercive policies at FLVS, the NCLBA of 2001 and the change in funding, directly impact the organization rather than the student; therefore, it can be concluded that coercive policies that directly impact the organization are ineffective in improving student success on the aggregate level. Florida Virtual School has not implemented coercive policies that directly impact the student. For example, FLVS does not have a policy that states if a student does not turn in his or her assignments in on time then the result will be a zero grade for a late assignment. This type of coercive policy might increase student success at FLVS in that the teachers will more empowered to build relationships with the students because they will be turning in work consistently and having regular communication with their teachers. It is clear that some students are not taking their enrollments at FLVS seriously as reflected by the large percentage of non-completions (69.31%) at the school.

The testing of  $H_2$  found that mimetic policies have an impact on student success that is statistically significant in both ANOVA and regression analysis. When FLVS consistently implemented mimetic policies that directly impacted the student's actions, student success increased, with the exception of discussion group postings. Discussion group postings did not result in increased in student success; however, survey respondents indicated that discussion group postings do not truly increase interaction with the teacher when implemented into the curriculum. It is recommended that FLVS eliminate discussion group postings from the

curriculum in that they are not effective in increasing student success. Florida Virtual School should consider adopting additional mimetic policies that encourage relationships between the students and the teachers, thereby increasing student success in the secondary online education environment.

Hypothesis 3 could not be tested in this study in that survey respondents felt that none of the policies that have been implemented at FLVS were normative in nature. Hypothesis 4 found that coercive policies do not have a more positive impact on student success than mimetic or normative policies; in fact, this study found that coercive policies had a negative impact on student success. As discussed earlier, the coercive policies that have been implemented at FLVS impact the organization rather than the student; therefore, it is possible that the students did not change their behaviors or actions because the policy did not impact them directly. Florida Virtual School should consider creating mimetic policies to implement the coercive policies that impact the organization. For example, the NCLBA of 2001 requires that students obtain learning gains every year; as was discovered in this study, this has not occurred at FLVS. So, as a means to improve student success as required by the NCLBA of 2001, FLVS should implement more policies that increase student interaction with the teacher of record so as to create the relationship that is necessary to improve student success. In order to establish this relationship, it is recommended that FLVS attempt to alleviate the time teachers spend on students that are not working in the class which will enable the teachers to spend more time building relationships with the students that are working in the class, or, more plainly put, are producing outcomes and generate revenue. One possible solution to this is for students to be automatically withdrawn if they do not submit the required amount of work in the class within the first few weeks in which a

student is enrolled in the class. Relieving the amount of time teachers spend contacting students that are not working in the class would be extremely beneficial and would enable teachers to spend more time contacting students who are working in their courses. In time, students will learn that taking a class with FLVS requires dedication and work; they will not sign up for classes in which they are not committed, and the teachers can spend their time developing relationships with students that are taking the class seriously.

In 2003-2004, FLVS was subject to another coercive policy when the state legislature changed the funding model from a line-item allocation to a FTE model which is based on pay-for-performance. Hypothesis 5 found that the change in funding from a line-item allocation to a performance-based pay schedule decreased student success. It is speculated that teachers may be pushing students through the courses rather than ensuring that students are getting the highest grade possible so as to generate revenue for the school and reach the credit goals set for each class. At FLVS, teachers are required to complete a certain amount of credits, or students, per academic year; as a result, teachers may feel pressure to move students out of the class when they are not working as they will not result in a credit completion. When FLVS implemented the change in funding policy in 2003-2004, the number of non-completions grew substantially and the GPA of the school continued to decrease. Withdrawing students that are not working in the course makes room for other students that will work in the course. When the funding of the organization changed from a static budget to a performance-based budget, it appears as though some focus may have shifted from student success to revenue generation, as would naturally occur.



Another surprising conclusion was drawn with H<sub>6</sub>. Hypothesis 6 states that as the number of policies increases, student success increases. The results of this study found that student success decreases as the number of policies increases. It is concluded that there is a saturation point at which too many policies is a detriment rather than a benefit. At FLVS, policy changes occur quite often and it is sometimes difficult for the teachers and students to adapt to the changes easily. Florida Virtual School should consider streamlining the policies and procedures so as to be more user-friendly and concise for both the teachers and the students. One way in which this can occur is to place more responsibility back on the students and guardians. There is a substantial amount of non-completions at FLVS. This may be occurring if students and guardians have the impression that it is simple for FLVS to process a course request or enrollment in that there is no repercussion for non-compliance. Policy at FLVS can be very simple if the responsibility is placed back on to the students and guardians. Policies like the 28-day grace period and the pace chart can be eliminated if the student and guardian would have play an active role in their commitment to the course; teachers are limited as to their ability to force the students to work, therefore, these policies continue to be necessary. Ideally, placing accountability on the students and guardians and out of the hands of teachers (for example, withdrawing or failing students) can enable the teachers to have more time to interact with students that are working consistently in their courses.

The most disturbing finding in this study is H<sub>7</sub>, realizing the number of non-completions at FLVS is disheartening. So much time and money is spent providing a tremendous service to the residents of Florida, yet it seems as though the return is rather low with only 292,612 enrollments, or 30.69% of the enrollments at FLVS resulting in a course completion.

Unfortunately, teachers spend hours grading, calling, and emailing students only to process a non-completion enrollment. Again, the problem is student and guardian accountability. It does not appear, based on the number of non-completions at FLVS, that the students or guardians understand the amount of time and money that is associated with processing their requests. A large majority of the enrollments at FLVS do not result in a completed credit (69.31%). It seems as though too much time is spent processing enrollments that do not result in a course completion. Students and guardians need to understand the privilege and serious nature of their ability to take a FLVS course. Perhaps FLVS can consider a nominal refundable processing/activation fee in which the fee is refundable only if the student successfully completes the course. If the student does not complete the course, FLVS retains the processing fee; however, if the enrollment results in the student completing the course, he or she will receive a full refund. It is understood that this is a state-funded education system and, according to some, it may not be perceived as a fair practice to have a processing/activation fee; however, this practice is in place in the traditional public school system via obligations, or fees, for textbooks and materials that are not returned to the school. FLVS would benefit from adopting an obligations system which would decrease unnecessary course requests and unresponsive participants in the system. In addition, a refundable processing/activation fee will place responsibility and accountability on the student and guardian as well as enable FLVS to recover some costs for processing an enrollment that does not result in a completion. Enrolling in FLVS is a choice and a privilege; it is not a requirement. Students that enroll in FLVS courses need to understand that they are responsible for completing assignments and complying with the expectations to which they agreed when they enrolled in the course.

As found in this study, student success can be improved in the secondary online education environment through mimetic policies. Mimetic policies produced the most improvement in student success at FLVS during the study period. Although coercive policies might appear to be more effective on the surface, they are not effective long-term in the secondary online education environment. In terms of policy recommendations to FLVS, more accountability and responsibility needs to be placed on the student and guardian in the secondary online education environment. This study clearly indicates that building relationships with teachers is an important and integral part of student success in the secondary online education environment; however, teachers cannot build relationships with students that are not responsive to teacher requests for communication.

### *Research Questions*

Five research questions were posed at the beginning of this study. In conducting the analysis and testing the hypotheses, these questions have been answered. Research question 1 was tested through hypotheses 1 through 3: has student success, as measured by final letter grade, increased at FLVS from 1998-2007? The answer is two-fold: yes, and no. Yes, student success increased from the 1998-1999 through 2002-2003 school years (as measured by the mean of the final letter grade, or GPA, for the academic years), but it decreased in the subsequent years with the exception of the 2005-2006 where it slightly increased but was substantially lower than the highest GPA in 2002-2003 (2.8, 3.20, respectively).

Research question 2 was tested through hypotheses 1 through 4: do changes in policy play a role in increasing student success at FLVS? Again, the answer is two-fold: yes, and no.

Yes, when analyzing the trends of the school's GPA and the number of mimetic and coercive policies present during a given academic year, mimetic policies play a role in increasing student success at FLVS, and coercive policies play a role in decreasing student success long-term. Regression analysis found that the presence of coercive and mimetic policies at FLVS had a statistically significant impact on explaining the variance in student success during the study period; however, the overall explanatory power of the variables is relatively weak (11%). Therefore, it can be concluded that although mimetic policies increase student success and coercive policies do not increase student success long-term, the direct impact on explaining the variance in the student's final letter grade (whether positive or negative) is limited.

Research question 3 was tested through hypothesis 6: does the number of active policies in a given year play a role in increasing student success at FLVS? The answer is clear: no. In fact, the opposite seems to occur; as the number of active policies in a given year increases, student success decreases. The trend is the same as research question 1 in that the first few years of the study period do result in an increase in the school's GPA, but as the number of policies continues to increase, student success begins to consistently decline.

Research question 4 was tested through hypothesis 4: have the mandates and sanctions of the NCLBA of 2001 provided sufficient pressure on FLVS to implement policies that effectively increase student success? Unfortunately, the answer is no. Initially, the GPA of the school increased the first year in which the NCLBA of 2001 was implemented in 2002-2003; however, after the initial spike in GPA in 2002-2003, student success decreased and did not increase until the 2005-2006 (increased 3%), followed by a decrease in the school's GPA in 2006-2007 of 8%.

Research question 5 was tested through hypothesis 5: has the change in funding from a line-item allocation to performance based reimbursement increased student success at FLVS? Again, the answer is clearly no. When the funding change took place in the 2003-2004 school year, the GPA of the school dropped significantly followed by a trend in a decreasing GPA for the school. As speculated previously, it is possible that the focus on credit completion rather than student mastery may be driving teachers to produce numbers rather than to produce high letter grades; therefore, the GPA is decreasing.

The research questions in this study were formed from a positive standpoint and it was expected that the answers to the research questions would be positive; as can be seen, the answers to the research questions are not particularly positive as student success, overall, is not increasing at FLVS and the policy changes that have been made appear to be making a small impact on student performance (low explanatory power of the independent variables on the dependent variable). It is the hope of the researcher that this study will generate other studies that will delve into other reasons why student success is not increasing at FLVS.

## **Contributions**

### *Theoretical Contributions*

The use of institutional theory as the guiding framework for this study enabled the researcher to determine which mechanisms of isomorphism are effective in secondary online education. The current literature regarding institutional theory and education tend to be geared toward higher education; therefore, this study contributes to the literature regarding institutional theory in secondary education generally, and secondary online education specifically. A review

of the literature indicates that coercive policies have an impact on education; the same conclusion was drawn in this study as well. In secondary online education, it has been concluded that the existence and number of coercive policies in place do not explain a substantial amount of variance in the dependent variable; in this case, the student's final letter grade. Overall, this study found that coercive policies have a negative impact on student success in the secondary online education environment. The coercive policies in this study directly impacted the organization, not the student, so it is possible that coercive policies that directly impact the student may increase student success. It would be beneficial for FLVS to devise a policy that is coercive in nature and conduct a pilot-study to determine if coercive policies that directly impact the students have a positive impact on student success.

This study confirmed that mimetic isomorphism is a mechanism which brings statistically significant change to the secondary online education environment; however, as with coercive policies, regression analysis found that the presence of mimetic policies does not appear to explain a substantial amount of the variance in the dependent variable. Survey respondents indicated that discussion group posting are ineffective in increasing interaction between the student and the teacher; therefore, it is recommended that FLVS discontinue discussion group postings and focus on policies that are more engaging for the students and that build a relationship with the teacher.

Unfortunately, none of the policy changes at FLVS were classified as normative policies, therefore, no theoretical contributions were made for this mechanism of isomorphism. It should be noted that FLVS requires the faculty and staff to attend annual staff meetings; however, this

has always been in place at FLVS, therefore, any training or professional development received at the staff meetings would most likely not result in a change or increase in student success at the school. In other words, no variance would be detected as a result of the staff conferences as they have been a constant factor at FLVS.

This study verified Kearsley's Theory of Engagement (2000) regarding student success in online education with the exception of discussion group postings which, as indicated above, do not truly engage students according to the respondents of the survey. Unfortunately, one component of Kearsley's theory could not be tested as none of the policies that have been implemented at FLVS fall under the Create category of his theory. Kearsley's Relate and Donate components were confirmed in the study; interaction with teachers and peers, and outside pressure to complete the course results in increased student success in secondary online education. The results of regression analysis indicate that the independent variables included in this study explain 11% variance in the student's final letter grade.

### *Practical Contributions*

The impact of organizational policy on student success at FLVS had not been tested prior to this study. Therefore, this study contributes to the literature regarding the impact of policy on student success in the secondary online education environment as well as helps FLVS understand which policies are most effective in increasing student success. In addition, it is recommended that FLVS take into consideration the creation of policies that will reduce the rate of non-completions through increased student and parent accountability. As a tax-payer funded entity, it is important that the organization produce positive outcomes and increase student

success. In the last four years of the study period, the performance of FLVS students has been decreasing and the number of non-completions has been increasing. It is incumbent upon FLVS to implement policies that incorporate student and guardian responsibility and accountability into the enrollment process.

Although vast literature is available on student success in the traditional classroom since the implementation of the NCLBA of 2001, little research exists regarding the improvement of student success in online courses overall, as well as a measure of student success in the secondary online education environment since the implementation of the NCLBA of 2001. It was found in this study that student success has not consistently increased in the secondary online education environment since the implementation of the NCLBA of 2001.

This study confirmed the findings of previous research in the field of education. Gender, race, and GPA were found to be statistically significant in predicting student success in the secondary online education environment, confirming the findings in the literature review. In addition, the influence parent involvement regarding student success was confirmed in this study; monthly phone calls require communication with the parent or guardian at FLVS, thereby forcing parental involvement. In this study, it was found that the implementation of monthly phone calls increased student success in the secondary online education environment, confirming the literature in this area.

This study enabled to researcher to determine which type of policy is the most effective in increasing student success in the secondary online education environment. It is concluded that the type of policy which promotes student success in the secondary online education



environment is mimetic policy even though regression analysis found that the presence of these policies cannot explain a substantial amount of the variance in the student's final letter grade. Monthly phone calls and oral assessments build relationships with the students, and it has been concluded that relationship building is the key to increasing student success in the secondary online education environment. This study has identified 11% of the variance detected in the student's final letter grade at FLVS during the study period and serves as a template upon which many future studies can be conducted. This study has revealed that there are many other factors that influence student success in the secondary online education environment, and it is the intent of the researcher to encourage future studies in this area to identify what contributes to a student's success in the secondary online education environment.

### **Limitations and Future Studies**

This study analyzed student success on the aggregate level at FLVS. Students that are Limited English Proficient (LEP) or that have an Individualized Education Plan (IEP) were not controlled for or analyzed in this study and could help explain some of the variance that was not accounted for in this study. Data for these variables was not available for this study. Future studies should attempt to gather data on these students to determine if they are successful in the secondary online education environment.

The NCLBA of 2001 identifies four target groups for learning gains: LEP, IEP, minority students, and students of low socioeconomic status. In this study, race, gender, and GPA served as control variables but were not analyzed separately for learning gains. Future studies can

measure the success of these target groups at FLVS to see if learning gains were achieved for the target groups of the NCLBA of 2001 over the study period.

Race, GPA, and gender were used as control variables in this study. This data was student-entered and was not verified by FLVS administration when the data was collected; administrative verification of these variables is not available for this time period. Florida Virtual School should consider verifying this information with the physical school in which the student is enrolled in the future; doing so would allow future researchers to have more reliable data.

This study did not take into account the teacher of record for each course. The effectiveness of the individual teacher can impact student performance and could explain some of the variance in the student's final letter grade that was not detected in this study. Years of experience, years of service with FLVS, and whether or not a teacher is National Board Certified (NBCT) could be included as a predictor of academic performance in the future. This information was not available for this study; the absence of this data may explain why a large portion of the variance in the student's final letter grade was not detected.

This study analyzed the academic achievement of Florida residents only. This study did not consider the success of students on the national and international level. In that students taking FLVS courses at the international and national level pay for the course, their success may be much higher than the students that reside in Florida in that student residing in Florida do not pay for the courses in which they are enrolled at this time. Future researchers may consider comparing the success of national and international students to the students residing in Florida.

This study did not take into account the type of school in which a student is enrolled. It is possible that some variance in achievement may be due to school enrollment; however, incorporating this variable into the study was beyond the scope of this research as the purpose of this study was to provide a template for future studies if it was found that the change in student success over the study period was statistically significant. In that it was found that changes in student success were statistically significant, it may be beneficial for future studies to take the type of school in which a student is enrolled into consideration as to why the student success is changing at FLVS. For example, there may be a large increase in the amount of public school students which could have contributed to the variance in the school's GPA.

Input from students, parents, and taxpayers was not included in this study. In future studies, input from these stakeholders may provide an additional perspective as to the perceived impact of FLVS in increasing student success. Additionally, the perspective of tax-payers in terms of the cost effectiveness of FLVS compared to alternative forms of education may provide future researchers with information that will lead to more detailed recommendations. Students and parents of FLVS provide additional insight and could be consulted in future studies to determine the impact that FLVS has had on him or her personally. For example, some students may not have completed high school without the services offered through FLVS. In this study, it was not the intent of the researcher to gather this information as it was necessary to first establish whether there were statistically significant changes in student success throughout the study period.

Finally, this study was not designed to identify specific barriers to student success; rather, this study was designed to serve as a framework upon which future studies can be conducted. Additional variables such as the parent's level of education, household income, county of residence, and whether or not the student lives in a rural area or a city are all variables that should be considered for use in future studies. Additionally, the measurement of student success could be expanded to include variables such as employability, whether or not students entered and/or graduated from college, and earnings capacity after graduation. The inclusion of these variables was determined to be unnecessary due to the exploratory nature of this study.

The nature of this study was to determine whether or not student success is increasing at FLVS; it was found that student success is not increasing at FLVS and further research needs to be conducted to determine the specific reasons why students are withdrawing from FLVS at such high rates as well as reasons why the GPA of the school is decreasing. Although 11% of the variance in student success was accounted for in this study, it is important for future researchers to further identify reasons why student success at FLVS has been consistently decreasing. It is particularly incumbent upon future researchers to delve into the specifics as to why there are such drastic changes in the number of non-completions. Again, this study was not designed to find out the answers to those questions – this study was designed to find out if additional research questions existed, and they do. Future studies should be able to identify specific and personal reasons for the decreasing GPA and increasing non-completions at the school now that this study has concluded that these trends exist at FLVS.

## **Concluding Remarks**

Although some limitations are present, the conclusions that have been drawn as a result of this study have made a contribution to the field of literature regarding policies that impact student success in the secondary online education environment as this is an area where research is lacking. In addition, this study successfully classified policy changes at FLVS based on institutional theory and enabled the research to conclude that mimetic policies are the most effective type of policies in increasing student success in the secondary online education environment. The research questions of this study have been answered. Student success, as measured by final letter grade, has not consistently increased from 1998-2007. Changes in policy do play a role in increasing, as well as decreasing, student success at FLVS; however, the impact of these changes explains a nominal amount of variance in student success in the secondary online education environment. The mandates of the NCLBA of 2001 have not provided sufficient pressure on FLVS students to effectively increase student success; student success increased the first year in which the NCLBA of 2001 was implemented but then decreased in subsequent years. Finally, the change in funding from a line-item allocation to a performance-based reimbursement did not increase student success at FLVS; in fact, the change in funding appears to decrease student success as measured by the student's final letter grade.

Florida Virtual School offers a great service to the residents of Florida; yet it appears as though students and guardians do not understand the magnitude of their non-compliance regarding the amount of time it takes to process non-completions. Student success is decreasing at FLVS and the organization might consider a focus on student and guardian accountability in the enrollment process, as well as to continue to empower teachers to build solid relationships

with students that are working diligently in their courses. A more proficient system needs to be in place at FLVS that will place accountability back on the students and guardians and enable teachers to focus on building lasting, impressionable, and positive relationships with their students.

## **APPENDIX A: OPERATIONALIZED VARIABLES**

Variable	Description	Type	Values
Academic Year	Academic year being studied at FLVS	Independent	1-1998/1999 2-1999/2000 3-2000/2001 4-2001/2002 5-2002/2003 6-2003/2004 7-2004/2005 8-2005/2006 9-2006/2007
Race	Minority/Non-minority	Control	1-White/Non-Hispanic 2-Minority
Gender	Male/Female	Control	1-Female 2-Male
GPA	Entrance GPA of Student	Control	Continuous
Final Letter Grade	Final Letter Grade Student Received in FLVS Course	Dependent	0-F 1-D 2-C 3-B 4-A 5-Course Request Incomplete 6-Never Activated 7-Never Assigned 8-Withdrawn/No Grade
28 Day Grace Period	Present/Not Present	Dichotomous	0-Policy Not Present 1-Policy Present
Pace Chart	Present/Not Present	Dichotomous	0-Policy Not Present 1-Policy Present
Monthly Phone Calls	Present/Not Present	Dichotomous	0-Policy Not Present 1-Policy Present
NCLBA	Present/Not Present	Dichotomous	0-Policy Not Present 1-Policy Present
Funding	Present/Not Present	Dichotomous	0-Policy Not Present 1-Policy Present
Discussion Groups	Present/Not Present	Dichotomous	0-Policy Not Present 1-Policy Present
Oral Assessments	Present/Not Present	Dichotomous	0-Policy Not Present 1-Policy Present



## **APPENDIX B: SURVEY SUMMARY**

**1 Please describe the role that best describes your current position with FLVS.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	10	6.4	6.4	6.4
ADMINISTRATIVE TEAM	6	3.8	3.8	10.3
CURRICULUM TEAM	9	5.8	5.8	16.0
GLOBAL SERVICES	1	.6	.6	16.7
INSTRUCTIONAL LEADER/LEARNING COMMUNITY LEADER	4	2.6	2.6	19.2
TEACHER	110	70.5	70.5	89.7
LITERACY TEAM	1	.6	.6	90.4
PROFESSIONAL DEVELOPMENT TEAM	3	1.9	1.9	92.3
SUPPORT STAFF	6	3.8	3.8	96.2
TECHNICAL SUPPORT TEAM	6	3.8	3.8	100.0
Total	156	100.0	100.0	

**2 Please select your total years of service with FLVS.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LESS THAN ONE YEAR	45	28.8	28.8	28.8
1-2 YEARS	39	25.0	25.0	53.8
3-4 YEARS	40	25.6	25.6	79.5
5-6 YEARS	19	12.2	12.2	91.7
7-8 YEARS	8	5.1	5.1	96.8
9-10 YEARS	3	1.9	1.9	98.7
MORE THAN 10 YEARS	2	1.3	1.3	100.0
Total	156	100.0	100.0	

**3 Please select the type of policy that you feel is most strongly associated with the 28-day grace period.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	COERCIVE	55	35.3	39.0	39.0
	MIMETIC	70	44.9	49.6	88.7
	NORMATIVE	5	3.2	3.5	92.2
	NOT SURE	11	7.1	7.8	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**4 Please select the type of policy that you feel is most strongly associated with the pace chart.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	COERCIVE	22	14.1	15.6	15.6
	MIMETIC	99	63.5	70.2	85.8
	NORMATIVE	9	5.8	6.4	92.2
	NOT SURE	11	7.1	7.8	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**5 Please select the type of policy that you feel is most strongly associated with monthly phone calls.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	COERCIVE	28	17.9	20.0	20.0
	MIMETIC	92	59.0	65.7	85.7
	NORMATIVE	17	10.9	12.1	97.9
	NOT SURE	3	1.9	2.1	100.0
	Total	140	89.7	100.0	
Missing	System	16	10.3		
Total		156	100.0		

**6 Please select the type of policy that you feel is most strongly associated with the NCLBA of 2001.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	COERCIVE	74	47.4	52.5	52.5
	MIMETIC	26	16.7	18.4	70.9
	NORMATIVE	16	10.3	11.3	82.3
	NOT SURE	25	16.0	17.7	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**7 Please select the type of policy that you feel is most strongly associated with funding based on FTE.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	COERCIVE	67	42.9	47.5	47.5
	MIMETIC	26	16.7	18.4	66.0
	NORMATIVE	13	8.3	9.2	75.2
	NOT SURE	35	22.4	24.8	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**8 Please select the type of policy that you feel is most strongly associated with discussion group postings.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	COERCIVE	14	9.0	9.9	9.9
	MIMETIC	91	58.3	64.5	74.5
	NORMATIVE	14	9.0	9.9	84.4
	NOT SURE	22	14.1	15.6	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**9 Please select the type of policy that you feel is most strongly associated with oral assessments.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	COERCIVE	25	16.0	17.7	17.7
	MIMETIC	105	67.3	74.5	92.2
	NORMATIVE	8	5.1	5.7	97.9
	NOT SURE	3	1.9	2.1	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**10 Participation in discussion group postings increases interaction between students and students.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	20	12.8	14.1	14.1
	AGREE	51	32.7	35.9	50.0
	NEITHER AGREE NOR DISAGREE	19	12.2	13.4	63.4
	DISAGREE	41	26.3	28.9	92.3
	STRONGLY DISAGREE	11	7.1	7.7	100.0
	Total	142	91.0	100.0	
	Missing	System	14	9.0	
Total		156	100.0		

**11 Monthly phone calls increase interaction between guardians and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	102	65.4	71.8	71.8
	AGREE	35	22.4	24.6	96.5
	NEITHER AGREE NOR DISAGREE	3	1.9	2.1	98.6
	DISAGREE	2	1.3	1.4	100.0
	Total	142	91.0	100.0	
	Missing	System	14	9.0	
Total		156	100.0		

**12 Monthly phone calls increase interaction between students and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	96	61.5	67.6	67.6
	AGREE	38	24.4	26.8	94.4
	NEITHER AGREE NOR DISAGREE	3	1.9	2.1	96.5
	DISAGREE	5	3.2	3.5	100.0
	Total	142	91.0	100.0	
Missing	System	14	9.0		
Total		156	100.0		

**13 Participation in discussion group postings increases interaction between students and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	14	9.0	9.9	9.9
	AGREE	41	26.3	28.9	38.7
	NEITHER AGREE NOR DISAGREE	31	19.9	21.8	60.6
	DISAGREE	46	29.5	32.4	93.0
	STRONGLY DISAGREE	10	6.4	7.0	100.0
	Total	142	91.0	100.0	
Missing	System	14	9.0		
Total		156	100.0		

**14 Oral assessments increase interaction between students and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	102	65.4	71.8	71.8
	AGREE	36	23.1	25.4	97.2
	NEITHER AGREE NOR DISAGREE	3	1.9	2.1	99.3
	DISAGREE	1	.6	.7	100.0
	Total	142	91.0	100.0	
Missing	System	14	9.0		
Total		156	100.0		

**15 The 28-day grace period ensures that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	14	9.0	9.9	9.9
	AGREE	50	32.1	35.2	45.1
	NEITHER AGREE NOR DISAGREE	31	19.9	21.8	66.9
	DISAGREE	41	26.3	28.9	95.8
	STRONGLY DISAGREE	6	3.8	4.2	100.0
	Total	142	91.0	100.0	
	Missing System	14	9.0		
Total	156	100.0			

**16 The pace chart ensures that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	20	12.8	14.1	14.1
	AGREE	41	26.3	28.9	43.0
	NEITHER AGREE NOR DISAGREE	31	19.9	21.8	64.8
	DISAGREE	44	28.2	31.0	95.8
	STRONGLY DISAGREE	6	3.8	4.2	100.0
	Total	142	91.0	100.0	
	Missing System	14	9.0		
Total	156	100.0			

**17 The NCLBA of 2001 ensures that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	5	3.2	3.5	3.5
	AGREE	12	7.7	8.5	12.0
	NEITHER AGREE NOR DISAGREE	46	29.5	32.4	44.4
	DISAGREE	58	37.2	40.8	85.2
	STRONGLY DISAGREE	21	13.5	14.8	100.0
	Total	142	91.0	100.0	
	Missing System	14	9.0		
Total	156	100.0			

**18 The funding change from a line-item allocation to FTE ensures that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	9	5.8	6.3	6.3
	AGREE	22	14.1	15.5	21.8
	NEITHER AGREE NOR DISAGREE	68	43.6	47.9	69.7
	DISAGREE	38	24.4	26.8	96.5
	STRONGLY DISAGREE	5	3.2	3.5	100.0
	Total	142	91.0	100.0	
	Missing System	14	9.0		
Total	156	100.0			

**19 Oral assessments ensure that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	32	20.5	22.5	22.5
	AGREE	67	42.9	47.2	69.7
	NEITHER AGREE NOR DISAGREE	22	14.1	15.5	85.2
	DISAGREE	19	12.2	13.4	98.6
	STRONGLY DISAGREE	2	1.3	1.4	100.0
	Total	142	91.0	100.0	
	Missing System	14	9.0		
Total	156	100.0			

**20 Participation in discussion groups does not increase interaction between students and students.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	14	9.0	9.9	9.9
	AGREE	42	26.9	29.6	39.4
	NEITHER AGREE NOR DISAGREE	25	16.0	17.6	57.0
	DISAGREE	50	32.1	35.2	92.3
	STRONGLY DISAGREE	11	7.1	7.7	100.0
	Total	142	91.0	100.0	
	Missing System	14	9.0		
Total	156	100.0			



**21 Monthly phone calls do not increase interaction between students and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	2	1.3	1.4	1.4
	AGREE	7	4.5	4.9	6.3
	NEITHER AGREE NOR DISAGREE	3	1.9	2.1	8.5
	DISAGREE	66	42.3	46.5	54.9
	STRONGLY DISAGREE	64	41.0	45.1	100.0
	Total	142	91.0	100.0	
Missing	System	14	9.0		
Total		156	100.0		

**22 Participation in discussion group postings does not increase interaction between students and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	11	7.1	7.8	7.8
	AGREE	41	26.3	29.1	36.9
	NEITHER AGREE NOR DISAGREE	24	15.4	17.0	53.9
	DISAGREE	47	30.1	33.3	87.2
	STRONGLY DISAGREE	18	11.5	12.8	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**23 Oral assessments do not increase interaction between students and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AGREE	4	2.6	2.8	2.8
	NEITHER AGREE NOR DISAGREE	7	4.5	5.0	7.8
	DISAGREE	63	40.4	44.7	52.5
	STRONGLY DISAGREE	67	42.9	47.5	100.0
	Total	141	90.4	100.0	
Missing	System	15	9.6		
Total		156	100.0		

**24 Monthly phone calls do not increase interaction between guardians and teachers.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	1	.6	.7	.7
	AGREE	3	1.9	2.1	2.8
	NEITHER AGREE NOR DISAGREE	2	1.3	1.4	4.2
	DISAGREE	66	42.3	46.5	50.7
	STRONGLY DISAGREE	70	44.9	49.3	100.0
	Total	142	91.0	100.0	
Missing	System	14	9.0		
Total		156	100.0		

**25 The 28-day grace period does not ensure that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	5	3.2	3.6	3.6
	AGREE	57	36.5	40.7	44.3
	NEITHER AGREE NOR DISAGREE	19	12.2	13.6	57.9
	DISAGREE	46	29.5	32.9	90.7
	STRONGLY DISAGREE	13	8.3	9.3	100.0
	Total	140	89.7	100.0	
Missing	System	16	10.3		
Total		156	100.0		

**26 The pace chart does not ensure that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	8	5.1	5.7	5.7
	AGREE	55	35.3	39.3	45.0
	NEITHER AGREE NOR DISAGREE	19	12.2	13.6	58.6
	DISAGREE	43	27.6	30.7	89.3
	STRONGLY DISAGREE	15	9.6	10.7	100.0
	Total	140	89.7	100.0	
Missing	System	16	10.3		
Total		156	100.0		

**27 The NCLBA of 2001 does not ensure that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	25	16.0	18.0	18.0
	AGREE	50	32.1	36.0	54.0
	NEITHER AGREE NOR DISAGREE	49	31.4	35.3	89.2
	DISAGREE	11	7.1	7.9	97.1
	STRONGLY DISAGREE	4	2.6	2.9	100.0
	Total	139	89.1	100.0	
	Missing System	17	10.9		
Total	156	100.0			

**28 The funding change from a line-item allocation to FTE does not ensure that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	8	5.1	5.7	5.7
	AGREE	40	25.6	28.6	34.3
	NEITHER AGREE NOR DISAGREE	64	41.0	45.7	80.0
	DISAGREE	17	10.9	12.1	92.1
	STRONGLY DISAGREE	11	7.1	7.9	100.0
	Total	140	89.7	100.0	
	Missing System	16	10.3		
Total	156	100.0			

**29 Oral assessments do not ensure that students will be successful.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY AGREE	4	2.6	2.9	2.9
	AGREE	35	22.4	25.0	27.9
	NEITHER AGREE NOR DISAGREE	12	7.7	8.6	36.4
	DISAGREE	61	39.1	43.6	80.0
	STRONGLY DISAGREE	28	17.9	20.0	100.0
	Total	140	89.7	100.0	
	Missing System	16	10.3		
Total	156	100.0			

**APPENDIX C. SPLIT-HALF METHODS RELIABILITY: PEARSON CORRELATION  
COEFFICIENTS**

	20	21	22	24	25	26	27	28	29
10 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	.809(**)	-0.157	.574(**)	-.186(*)	-0.106	.236(**)	.222(**)	-0.105	-0.106
N	0	0.062	0	0.026	0.214	0.005	0.009	0.216	0.211
	142	142	141	142	140	140	139	140	140
11 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	.243(**)	.503(**)	.237(**)	.559(**)	.223(**)	-.214(*)	-.196(*)	-0.141	-0.114
N	0.004	0	0.005	0	0.008	0.011	0.021	0.097	0.181
	142	142	141	142	140	140	139	140	140
12 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	.282(**)	.557(**)	.348(**)	.410(**)	-0.109	-.172(*)	.248(**)	-0.009	-0.081
N	0.001	0	0	0	0.198	0.042	0.003	0.919	0.343
	142	142	141	142	140	140	139	140	140
13 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	.672(**)	-0.133	.755(**)	-0.159	-0.101	-.183(*)	.222(**)	-.183(*)	-0.161
N	0	0.114	0	0.059	0.235	0.03	0.008	0.031	0.057
	142	142	141	142	140	140	139	140	140
14 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	.272(**)	.350(**)	.260(**)	.346(**)	-.204(*)	.219(**)	-0.118	.222(**)	.302(**)
N	0.001	0	0.002	0	0.016	0.009	0.166	0.009	0
	142	142	141	142	140	140	139	140	140
15 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	0.002	-0.106	-0.002	.287(**)	.791(**)	.705(**)	.317(**)	.382(**)	.503(**)
N	0.981	0.209	0.984	0.001	0	0	0	0	0
	142	142	141	142	140	140	139	140	140
16 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	-0.104	-0.101	-0.095	.254(**)	.688(**)	.840(**)	.364(**)	.367(**)	.461(**)
N	0.216	0.232	0.261	0.002	0	0	0	0	0
	142	142	141	142	140	140	139	140	140
17 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	.265(**)	-0.143	.228(**)	-0.152	.299(**)	.359(**)	.779(**)	.342(**)	-0.154
N	0.001	0.089	0.006	0.071	0	0	0	0	0.069
	142	142	141	142	140	140	139	140	140
18 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	-0.048	-0.105	-0.132	-0.116	.435(**)	.396(**)	.413(**)	.755(**)	.402(**)
N	0.572	0.215	0.118	0.169	0	0	0	0	0
	142	142	141	142	140	140	139	140	140
19 Pearson Correlation	-	-	-	-	-	-	-	-	-
Sig. (2-tailed)	-0.04	-.200(*)	-0.027	-.206(*)	.529(**)	.478(**)	.263(**)	.362(**)	.735(**)
N	0.64	0.017	0.747	0.014	0	0	0.002	0	0
	142	142	141	142	140	140	139	140	140

**APPENDIX D: IRB APPROVAL LETTER**

## Notice of Expedited Initial Review and Approval

From : UCF Institutional Review Board  
FWA00000351, Exp. 5/07/10, IRB00001138

To : Rhonda McPherson

Date : March 26, 2008

IRB Number: SBE-08-05569

Study Title: **THE IMPACT OF ORGANIZATIONAL AND FEDERAL POLICY ON STUDENT SUCCESS IN**

**SECONDARY ONLINE EDUCATION: A CASE STUDY OF FLORIDA VIRTUAL SCHOOL**

Dear Researcher:

Your research protocol noted above was approved by **expedited** review by the UCF IRB Chair on 3/21/2008. **The expiration date is**

**3/20/2009**. Your study was determined to be minimal risk for human subjects and expeditable per federal regulations, 45 CFR 46.110.

The category for which this study qualifies as expeditable research is as follows:

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

**As previously discussed, the student IDs should not be included in the dataset.**

The IRB has approved a **consent procedure which does not include, or which alters, some or all of the elements of**

**informed consent** as set forth in the federal regulations 45 CFR 46.116(d)(1-4). This has been approved for the student participants.

A **waiver of documentation of consent** has been approved for the educator participants. These participants do not have to sign a

consent form, but the IRB requires that you give participants a copy of the IRB-approved consent form, letter, information sheet, or

statement of voluntary consent at the top of the survey.

All data, which may include signed consent form documents, must be retained in a locked file cabinet for a should be maintained on a password-protected computer if electronic information is used. Additional requirements may minimum of

three years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants

be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

To continue this research beyond the expiration date, a Continuing Review Form must be submitted 2 – 4 weeks prior to

the expiration date. Advise the IRB if you receive a subpoena for the release of this information, or if a breach of confidentiality

occurs. Also report any unanticipated problems or serious adverse events (within 5 working days). Do not make changes to the

protocol methodology or consent form before obtaining IRB approval. Changes can be submitted for IRB review using the

Addendum/Modification Request Form. An Addendum/Modification Request Form **cannot** be used to extend the approval

period of a study. All forms may be completed and submitted online at <http://iris.research.ucf.edu> .

**Failure to provide a continuing review report could lead to study suspension, a loss of funding and/or publication**

**possibilities, or reporting of noncompliance to sponsors or funding agencies.** The IRB maintains the authority under

45 CFR 46.110(e) to observe or have a third party observe the consent process and the research.

On behalf of Tracy Dietz, Ph.D., UCF IRB Chair, this letter is signed by:

Signature applied by Janice Turchin on 03/26/2008 10:55:04 AM EST

University of Central Florida Institutional Review Board

Office of Research & Commercialization

12201 Research Parkway, Suite 501

Orlando, Florida 32826-3246

Telephone: 407-823-2901, 407-882-2901 or 407-882-2276

[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

IRB Coordinator



**APPENDIX E: INFORMED CONSENT LETTER**



## ***Informed Consent for an Adult in a Non-medical Research Study***

Researchers at the University of Central Florida (UCF) study many topics. To do this we need the help of people who agree to take part in a research study. You are being invited to take part in a research study which will include about 750 people. You can ask questions about the research. You can read this form and agree to take part right now, or take the form home with you to study before you decide. You will be told if any new information is learned which may affect your willingness to continue taking part in this study. You have been asked to take part in this research study because you are an employee of Florida Virtual School. You must be 18 years of age or older to be included in the research study and sign this form.

The person doing this research is a Ph.D. candidate in the Public Affairs program at the University of Central Florida.

Because the researcher is completing her dissertation, this research is being guided by Dr. Thomas Wan, a UCF faculty supervisor (dissertation committee chairman) and is also the Director of the Public Affairs Department at the University of Central Florida.

**Study title:** The Impact of Organizational and Federal Policy on Student Success in Secondary Online Education: A Case Study of Florida Virtual School.

**Purpose of the research study:** To determine the type of policies (coercive, mimetic, or normative) which are perceived to have the most impact on student success at Florida Virtual School.

**What you will be asked to do in the study:** In this study, you will be asked to complete an 11 question survey in which you classify policies into one of three categories and rank the perceived impact of specific policies on student success.

**Voluntary participation:** You should take part in this study only because you want to. There is no penalty for not taking part, and you will not lose any benefits. You have the right to stop at any time. Just tell the researcher or a member of the research team that you want to stop. You will be told if any new information is learned which may affect your willingness to continue taking part in this study.

**Location:** Please go to the link provided in the email from Wendy Scott to complete the survey online.

**Time required:** Completion of the survey will take approximately 10 minutes.

**Audio or video taping:**

This study does not include any audio or video taping.

**Risks:**

There are no expected risks for taking part in this study. You do not have to answer every question or complete every task. You will not lose any benefits if you skip questions or tasks. You do not have to answer any questions that make you feel uncomfortable. All completed

surveys are anonymous. You will not be asked to reveal your name, and the researcher cannot identify your name when you complete the survey.

**Benefits:**

As a research participant you will not benefit directly from this research; however, Florida Virtual School will benefit as an organization.

**Compensation or payment:**

There is no compensation or other payment to you for taking part in this study.

**Anonymous research:** This study is anonymous. That means that no one, not even members of the research team, will know that the information you gave came from you.

**Study contact for questions about the study or to report a problem:** Rhonda McPherson, Ph.D. Candidate, Department of Public Affairs, College of Health and Public Affairs, University of Central Florida at 386-774-1998 or Dr. Wan, Faculty Supervisor, Department of Public Affairs, College of Health and Public Affairs, University of Central Florida at 407-823-0170 or twan@mail.ucf.edu.

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

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