

METACOGNITIVE SELF-REGULATION, SELF-EFFICACY FOR LEARNING
AND PERFORMANCE, AND CRITICAL THINKING AS PREDICTORS OF
ACADEMIC SUCCESS AND COURSE RETENTION AMONG COMMUNITY
COLLEGE STUDENTS ENROLLED IN ONLINE, TELECOURSE, AND
TRADITIONAL PUBLIC SPEAKING COURSES

By

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ABSTRACT

The purpose of the study was to investigate whether metacognitive self-regulation, self-efficacy for learning and performance, and critical thinking could be identified as predictors of student academic success and course retention among community college students enrolled in online, telecourses, and traditional Fundamentals of Speech (public speaking) courses. The study was conducted during the Fall 2005 semester at Valencia Community College (VCC). Data for this study were collected from participating students enrolled in either one of the two online, two telecourse, and two traditional face-to-face public speaking courses chosen for analysis. Fifty-seven participants answered Pintrich, Smith, Garcia, and McKeachie (1991) Motivated Strategies for Learning Questionnaire (MSLQ). Quantitative statistical analysis was used to investigate the impact of metacognitive self-regulation, self-efficacy for learning and performance, and critical thinking on academic success and course completion in the three delivery modes.

Data were analyzed and found self-efficacy was a significant predictor of final course grade. There was a significant relationship between critical thinking and self-regulation but not final grade. Self-efficacy was a predictor of informative speech grade however; self-regulation and critical thinking were not. No variable was a significant predictor of course completion which may be due to the small sample size among students who took the survey and did not complete the course. There was no statistically significant difference found with self-efficacy, self-regulation, critical thinking and course type (online, telecourse, traditional).

This dissertation is dedicated to my big sisters: Leslie (in memory), Louise (Sargent), LynDea (Drury), and Lynece (Cutler) for never letting me be the teacher in play-school. To my dad (Edward, in memory) for always making sure we received a good education. To my mom (Mary) who supported me throughout this process, who was always interested in what I was learning, but most of all, for exemplifying a mother's love to me and all her girls.

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LIST OF ACRONYMS AND ABBREVIATIONS

LS	Learning Strategies
MSLQ	Motivated Strategies for Learning Questionnaire
SR	Self-regulation
SRL	Self-regulated learning
VCC	Valencia Community College

CHAPTER 1: INTRODUCTION

Background and Significance

The move toward students taking charge of their own learning steered its way into education during the late 1970s as research in metacognition (thinking about thinking) and social cognition (social influences on thinking) began to gain prominence in educational research (Paris & Winograd, n.d.; Zimmerman, 2002). Self-regulated learning (SRL) is the blending of cognitive, metacognitive, and motivational research that focus on the self of the learner. SRL was aligned with the new model of teaching that recognized individual differences in learning (Paris & Winograd, n.d.). Prior to this shift, student learning was viewed in terms of students having intellectual aptitude or intellectual deficiency or students being disciplined or undisciplined toward their learning (Zimmerman, 2002). Research in self-regulation may increase our understanding of the learner and provide the opportunity to design the public speaking curriculum mindful to learning in traditional and distance learning modes.

Purpose of Study

The purpose of this study was to investigate whether self-regulation (SR), self-efficacy, and critical thinking can be predictors of academic success and course retention among community college students enrolled in online, telecourse, and traditional Fundamentals of Speech (public speaking) courses. The motivation construct of self-efficacy for learning and performance, and the learning strategies constructs of self-regulation and critical thinking as measured by Pintrich, Smith, Garcia, and McKeachie's

(1991) Motivated Strategies for Learning Questionnaire (MSLQ) were the three constructs under investigation (see Chapter 3).

Questions arise as to why particular students are academically successful and why certain students complete courses within a specific learning environment. SR may identify predictors of academic success and course completion in all three learning modes. The purpose of this correlational study was to answer the following research questions:

1. To what extent do self-efficacy, self-regulation, and critical thinking predict academic success (defined as the final percentage grade awarded to the student)?
2. To what extent do self-efficacy, self-regulation, and critical thinking predict informative speech grade average?
3. To what extent do self-efficacy, self-regulation, and critical thinking predict course completion in the three instruction modes including online, telecourse, and traditional public speaking courses?
4. To what extent do self-efficacy, self-regulation, and critical thinking differ among students enrolled in online, telecourse, and traditional public speaking courses?

Justification for the Study

The relationship between students' self-regulation in distance and traditional learning environments and academic success and course completion were examined in this study. The findings may assist in the development of public speaking curriculum design and instructional delivery strategies beneficial to students' learning in online,

telecourse, and traditional public speaking courses. The MSLQ may assist institutions with measuring student course outcomes. For example, critical thinking is often advanced as a course and institutional objective. If critical thinking can be quantified, it may lend support in demonstrating that the learning outcome is being met. In an age where institutional accountability and demonstrating learning outcomes is center stage, having an opportunity to measure such an objective may prove beneficial.

The self-reported responses from students on the MSLQ may perpetuate further interest in self-regulation by the instructor and the institution. For example, the results may assist instructors in designing specific strategies within the course that will help the student successfully complete tasks. Instructors at an institution may want to design questions to measure how students self-regulate to determine if there is a relationship with students' end of term course satisfaction surveys.

Investigating the self-reported level of SR among community college students enrolled in a public speaking course may lend credibility to students having the capability for taking responsibility for their learning. More and more staff at community colleges are designing institutional mission statements, curriculum, and teaching around the learning-centered concept. The learning-centered concept not only places student learning first but “engages learners as full partners in the learning process, with learners assuming primary responsibility for their own choices” (O’Banion, 1997, p. 47). Schunk (1991) states that goal attainment may improve when students are allowed to set their learning goals. Bandura (1986) states that self-efficacy influences persistence. Social cognitive theory views goal setting and self-efficacy as a bidirectional process that influences the three sub-processes of self-regulation (Schunk, 1990). Self-observation, self-judgment,

and self-reaction are the three cognitive processes of SR and are central to goal attainment within the social cognitive theoretical framework of self-regulation (Bandura, 1994). For example, if the actual instructors deliver online and telecourse content in a sequence designed specifically for the institution where core competencies in public speaking have been established and SR embedded, it may result in higher course retention rates.

In addition to the move toward learning-centered community colleges, the characteristics of the student population must also be considered. Many community college students are first-generation college students and may lack the skills to self-regulate. Williams and Hellman (2004) conducted a study to determine differences in self-regulation among first- and second-generation college students taking online courses. The researchers found lower SR among first-generation college students compared to second-generation college students taking online courses. Bandalos and Gutkin (2003) investigated SR as a predictor of academic success among first-generation college students. The researchers' found ACT scores of first-generation students were better able to predict GPA compared to second-generation student scores. The study also found the motivation construct of expectancy belief was the most significant predictor in explaining GPA among first-generation students and a secondary predictor of GPA among second-generation students. Self-regulation can empower students to become self-aware of their learning skills and assist students in managing their effort. Correct strategy use allows for personal change (Zimmerman, 2002). Personal change may come in the form of academic success and course retention.

Self-regulated learners take control of their learning and have a variety of strategies that promote regulating such as planning and self-monitoring. Self-regulated students are agents and agents are purposeful in their pursuit of learning (Winne, 2004). Planning the type of learning strategy to use is specific to the discipline. Self-monitoring assists the learner in choosing the appropriate strategies for a task and calls for self-observation of performance, comparison of performance to a standard, and then acting in response to perceived differences (Zimmerman, 1989). A learner's heightened sense of self-efficacy motivates the learner and enhances his or her performance while heightening his or her self-regulatory efficacy (Lynch & Dembo, 2004). The reciprocal relationship of SR may function as a facilitator to academic success (Schunk, 1991), and perhaps, assist in understanding course retention.

Niemczyk and Savenye (2001) used the MSLQ to determine if a relationship existed among course grade, goal orientation, self-efficacy, and self-regulated strategies with students enrolled in an undergraduate computer literacy course. They found high self-efficacy was positively related to course grade. Bong (2001) studied undergraduate students enrolled in an instructional methods and technology course at a women's university in Seoul, Korea. The researcher was interested in investigating the strongest motivational construct associated with course performance and future enrollment intention. At midterm evaluation the researcher found task value (student's perception of the value of the learning task) held a stronger relationship to academic performance and future enrollment intention than did self-efficacy. By the end of term, self-efficacy was a stronger predictor of performance and enrollment intention, thus the research postulated future enrollment was less likely due to stronger student self-efficacy beliefs. Whipp and

Chiarelli (2004) incorporated SR learning strategies within a web-based technology course to study successful use of SR among six graduate students. The researchers found the participants used and modified SR strategies to meet the needs of the learning environment. In another study, Tuckman (2003) found undergraduate students who received SR training earned higher GPA's than students who did not receive SR training. Students receiving SR training held a higher GPA the quarter following the initial training compared to students who did not receive training thereby indicating transfer of strategy use to other academic courses and terms.

Zimmerman (1998) states self-evaluations may serve to motivate and build self-efficacy when the learner believes they possess the capacity to learn. Self-evaluation has been linked with higher skill acquisition, self-efficacy, self-satisfaction, interest, and influences learning strategy planning (Dabbagh & Kitsantas, 2004). Cognition, motivation, and affect constructs of SR are in use during self-evaluation (Paris & Paris, 2001). A two-part study conducted by Schunk and Ertmer (1999) investigated process and product goals and self-evaluation against achievement among college students enrolled in a Computers in Education course. The researchers found that process goals had a higher correlation with self-efficacy than did product goal self-evaluation. The study also showed that when self-evaluation occurs more frequently a more powerful relationship occurs between self-evaluation and motivation. Ley and Young (1998) interviewed regular admission students and developmental students (students required to take remedial coursework) attending a rural university and community college to determine if SR could predict enrollment status (regular or developmental). The researchers found self-evaluation had the strongest relationship to SR and SR could

predict admission status. More significantly, developmental students used fewer SR strategies compared to regular admitted students, which may partially explain low achievement. In another study, Young and Ley (2003) observed developmental instructors at a community college and found self-efficacy of learners was frequently supported; SR strategies were in use but not frequently reinforced. The findings suggest developmental educators need to incorporate more SR strategies in the developmental classroom.

Often, research conducted on public speaking courses centers on speaker communication apprehension. An exception is Carrell and Menzel's (1997) study on preparation and motivation of student skill and knowledge of public speaking. The researchers found motivation was related to public speaking skill (speech delivery) but not public speaking knowledge (final examination). No research on self-regulation and public speaking has been located, and yet, public speaking is a valued skill among many. For example, Zekeri (2004) examined the curricular competency areas that former college students found to be most valuable for career and reported oral communication, written communication, and public speaking as most vital to career enhancement.

Investigating SR among community college students enrolled in online, telecourse, and traditional public speaking courses may help instructors and institutions with understanding curriculum design and instructional delivery strategies within the different learning environments. Self-regulation may be more important (higher correlation) to academic success in distance learning environments when compared to the traditional learning environment. If students do not have the necessary learning strategies (LS) to manage learning in distance learning modes where the learning environment calls

for learners to more closely manage their learning, this may indicate why students do not succeed or complete the public speaking course. Deficiency in LS use may be more salient among the less experienced distance learner compared to the more experienced distance learner. If so, using LS in distance learning public speaking courses may improve academic success and course completion among distance learners. Students in the traditional classroom may have more exposure to LS through the instructor and peers, yet, may not recognize the transferability of those skills to other courses.

Providing students with an opportunity to use LS to enhance learning and motivation may also improve self-efficacy of students in all three public speaking delivery modes. Research shows high self-efficacy has a positive correlation with academic success, and LS help low achieving students improve academic performance. If self-efficacy is high and SR is low, does this help explain why students do not persist in the traditional or distance learning environment or why academic performance is low?

The staff of Valencia Community College (VCC) has established four Student Core Competencies to describe the learning outcomes for a VCC graduate and to promote lifelong learning. Each year the staff focuses on one of the competencies. VCC staff has dedicated the 2005-2006 academic year as, The Year of Think. Students, instructors, and administrators have different opinions about assessment and learning outcomes.

However, critical thinking is an institutional objective. The critical thinking construct allows the student to report on his or her perception of his or her ability to think critically. The learner's perception about his or her critical thinking ability as high, moderate or low may correlate with high, moderate, or low factors in self-regulation and self-efficacy. If so, can academic success and course completion be implied regardless of learning

environment when a student scores high in critical thinking, self-regulation, and self-efficacy?

Examining the relationship between self-efficacy, self-regulation, critical thinking and academic performance and course completion may indicate if students have the skills required to take responsibility for their own learning in a public speaking course offered at a learning-centered community college. It may also help in understanding if any one or a combination of these constructs is more relevant to teaching and learning in distance learning and traditional classroom environments.

Assumptions of the Study

A number of assumptions were made in the planning, implementation, and analyzing the results of this study. First, students can accurately engage in self-reporting their self-regulated learning behavior, and background information. Second, instructors can accurately measure student performance. Third, the informative speech evaluation form used to measure student speech performance was an accurate measure of performance. In addition, the sample and resulting data were assumed to be representative of the larger population.

Limitations of the Study

There are several limitations to the study. Student self-reporting on their self-regulated learning behaviors may not actually reflect the participants' true engagement in the factors under investigation. However, Kuh et al. (2001) asserts the validity of self-reports are likely under five conditions:

1. the information requested is known to the respondents;

2. the questions are phrased clearly and unambiguously;
3. the questions refer to recent activities;
4. the respondents think the questions merit a serious and thoughtful response;
5. answering the questions does not threaten, embarrass, or violate the privacy of the respondent or encourage the respondent to respond in socially desirable ways (p. 9).

To address this issue further, student informative speech grade average and final course grade average was collected for analysis.

The survey was posted on a dedicated Web site where students had to choose to log-in and access the survey from a computer. Carini, Hayek, Kuh, Kennedy, and Ouiment (2003) have found minimal effects in Web surveys versus paper surveys among males and females, younger or older students. However, Web surveys tend to result in lower response rates. To address this, students were notified of the survey a minimum of two times by each instructor in each learning mode.

Using three instructors in three learning environments may result in grading inconsistencies. For example, some instructors may place more importance on certain speech criteria than other instructors may. Collecting informative speech grade average and utilizing the informative speech evaluation form and grading rubric which were developed by all three instructors should assist with this limitation.

Different measures are used to calculate final grades, including the types and number of speeches assigned. Collecting the informative speech grade average was chosen as a benchmark because this assignment followed two previously graded speech assignments in all three learning modes.

The differences within groups cannot be accounted for. The utilization of a convenience sample opposed to a random sample places a limitation on the general reliability of the findings.

Definition of Key Terms

The following are definitions of key terms used in this research project.

Self-regulation is a self-directive process by which learners monitor personal, behavioral, and environmental situations to establish effective learning strategies, set goals, observe, reflect, and alter mental aptitude into academic aptitude (Zimmerman, 2001).

Self-Regulated Learning is the proactive way learners demonstrate, resolve, modify, and plan for learning (Zimmerman, 2001).

Personal Influence consists of the forethought phase of self-regulated learning to include self-motivation, self-efficacy, and task analysis (Zimmerman, 1989).

Behavioral Influence consists of two sub-processes that occur during learning: performance phase and self-reflection. The performance phase of behavioral influence includes self-control and self-observation. Self-reflection includes self-judgment and self-reaction to performance. The sub-processes are interactive with each other and the environment (Zimmerman, 1989).

Environmental Influences consist of the social factors stemming from the personal and behavioral influences which affect the environment (Zimmerman, 1989).

Learning Strategies are designed to improve students' self-regulation within one of the three areas of influence: personal, behavioral, and environmental (Zimmerman, 1989).

Strategies signify a skill that is used purposefully and intentionally in completing a task (Winne, 1995). For example, outlining a textbook chapter, underlining important phrases in a text, and so on.

Distance Learning or Distance Education is defined as “planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic or other technology, as well as special organizational and administrative arrangements” (Moore & Kearsley, 1996, p. 2).

Online learning is a computer mediated form of distance learning. Students create their own learning environment, and perform academic tasks asynchronously.

Telecourse utilizes filmed curricular programs designed for televised viewing and is a form of distance learning.

Traditional course refers to students and teacher meeting face-to-face at a specific place and time.

Retention or Course Completion is the rate at which students persist in completing the Fundamentals of Speech course.

Academic Success is the final percentage grade awarded to the student that equates to a letter grade of C or above.

CHAPTER 2: REVIEW OF LITERATURE

A computerized literature search was conducted in an effort to identify published literature on self-regulation and the constructs associated with the MSLQ, distance learning, and public speaking. ERIC (Educational Resources Information Center), Academic Search Premier, PsycArticles, PrimarySearch, PsycINFO, WilsonWeb, and Professional Development Collection databases were searched limiting key terms to (a) motivated strategies for learning questionnaire, (b) self-regulated learning, and (c) self-regulation. With Boolean and, distance learning, distance education, public speaking, speech, and communication were added to the search terms. Articles published in non-peer reviewed journals were searched using the same terms and selected based on relevant content. Books, book chapters, and dissertations written on self-regulation were also consulted. Published research was selected based on the applicability to this study and the following sections provide a review of the research studies relating to self-regulation, distance learning, public speaking, the learning-centered community college, its students, and retention.

Self-Regulated Learning

The major theoretical perspectives on self-regulated learning are “operant, phenomenological, information processing, social cognition, volitional, Vygotskian, and cognitive constructivist approaches” (Zimmerman, 2001, p. 1). Educational psychologists and other researchers interested in self-regulated learning (SRL) predominately investigate SRL as a component of social cognitive theory. This review will examine SRL from the social cognitive perspective, the methodological research in SRL, and

distance education. Bandura's social learning theory, known now as social cognitive theory has piloted widespread research on self-regulation and will begin the review.

Social Cognitive Theory

According to Bandura's (1994) social-cognitive theory, a mutual causation of triadic associations, environmental, personal, and behavioral establish visual and verbal codes through which learning occurs. Fundamental to analyzing motivation within the social-cognitive framework is investigating cognitive abilities, knowledge attainment, vicarious model and modeled behavior, and the self-regulating processes (Bandura, 2001).

Cognitive adaptive competencies in human development are influenced by self-efficacy beliefs. Self-efficacy can be defined as "people's beliefs in their capabilities to exercise control over their level of functioning and environmental demands" (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996, p. 1206). Self-efficacy affects the degree of motivation based on the internal belief that one has the capabilities to succeed or not succeed in a specific endeavor. Information is organized and stored for future use through observation, assigning meaning, formative emotional affect, and motivating potency (Bandura, 1994).

Self-efficacy is influenced by environmental and social models that arise within the direct environment or reside outside the direct environment of the observer.

Discerning symbols help observers manage environmental determinants based on the modeled features, the cues of the model, and the innateness to the observer (Gredler, 2001). The perception of the positive or negative outcomes establishes motivational levels (Bandura, 1994).

The anticipated behavior is linked cognitively with the model behavior to help build self-efficacy through which motivational levels are established for a particular task. Self-efficacy is either enhanced or lessened through the vicarious experience. Vicarious experience occurs through the observation of the model and the effect of reward or punishment (Bandura, 2001). Goals are established based on self-efficacy levels. For example, a high level of self-efficacy results in greater individual motivation and low level self-efficacy results in a person's being less motivated or unmotivated. Previous positive and negative experiences, the ability of another to orally convince one of achieving success, and intuition assist in the formation of self-efficacy levels (Driscoll, 2000).

Social cognitive theory implies that external environmental factors help to develop the internal behavior standards of self. Primary behavior is self-regulated according to the expected outcomes adjudicated by the social environment. As a person develops cognitively, gains experience, and builds social awareness, personal standards are formed. Personal standards regulate motivational behavior chiefly by the self-absorption of stimuli. Personal standards guide; out of countenance expectations motivate (Bussey & Bandura, 1992).

It is through the self-reflective process that "people generate ideas, act on them, or predict occurrences from them," (Bandura, 2001, p. 269). Personal observation and assessment of one's behavior leads the learner to self-efficacy levels and establishes motivational standards (Gredler, 2001). However, regulating and reflecting upon one's skills does not always equate to transfer of skills nor repeated engagement in the

metacognitive skills process through which motivation can be established (Bandura et al., 1996).

Social-cognitive theory has been used to study academic achievement (Bandura et al., 1996; Linnenbrink & Pintrich, 2003; Pajares, 2003; Wood & Bandura, 1989; Zimmerman, 1989; 2002), responsible behavior in education (Bear, Manning, & Izard, 2003), identifying ways to increase bodily activity among students with disabilities (Kosma, Cardinal & Rintala, 2002), in gender development research (Bussy & Bandura, 1992), and other areas of inquiry in a variety of disciplines. The research in this review focuses on self-regulation in educational settings including distance learning.

Self-Regulation

Self-regulation is a self-directive process by which learners monitor personal, behavioral, and environmental situations to establish effective learning strategies, set goals, observe, reflect, and alter mental aptitude into academic aptitude (Zimmerman, 2002). Self-regulation is understood in the social cognitive perspective as dependent upon the situation and context where learners do not self-regulate systematically in all situations (Zimmerman, 2001). Adaptation and having the skills to self-regulate are as applicable to self-regulation as having positive self-efficacy. Zimmerman (2002) examined individual differences in academic learning through self-regulation processes and found behavioral skill, knowledge of self-regulated learning principles, positive self-efficacy, and interest in topic essential to self-regulation.

Building from the work of Bandura (1977), Zimmerman (2002) created a three-phase self-regulation model. Zimmerman's cyclical model addresses how the interaction within the triadic components of social cognitive theory calls for monitoring due to the

change in personal, behavioral, and environmental conditions during learning (Schunk, 2001a). Forethought, performance control, and self-reflection are the three interactive processes in the three-phase cyclical model (Zimmerman, 2001).

Forethought processes, such as goal setting, set the stage for the performance phase, where strategies designed to attain the goals are deployed. Self-monitoring during performance produces feedback that is evaluated for progress and interpreted for meaning during the self-reflective phase. Self-reflections affect forethought goals regarding subsequent efforts to learn—completing the self-regulatory cycle (p. 21).

Forethought is the first phase in the personal influence condition and involves goal setting and social-modeling. Social modeling allows the learner to internalize information transmitted in the social environment and includes self-efficacy, learning goal orientation, and intrinsic beliefs about learning (Schunk, 2001a). Goal setting includes task analysis and planning. Strategies such as goal setting are planned during the forethought process and then utilized during the performance phase. The forethought phase readies the learner for performance.

Behavioral influence consists of two sub-processes; performance control phase and self-reflection phase. The sub-processes interact with each other and the environment, and can assist in the development of SRL (Schunk, 2001a). The performance control phase “occurs during learning and affects attention and action” (p. 134). Attributional feedback, strategy instruction, and self-verbalization of strategies are linked with social modeling in the forethought phase. Attributional feedback focuses on the attribute or capability of the learner. Effort feedback may precede attributional

feedback until the skill is gained but attributional feedback will nourish self-regulation. Schunk (2001a) states, “Social comparison conveys normative information that is used to assess one’s capabilities” (p. 137). Social comparison is linked with goal setting in the forethought phase.

Self-reflection is the second sub-process under behavioral influence in the cyclical model. During this stage learners assess their performance toward the set goal and make adjustments to their learning strategies (Zimmerman, 1998; 2002). This level of development is influenced by the learner sustaining “their motivation through personal goals and a sense of self-efficacy for attaining them” (Schunk, 2001a, p. 143). Self-monitoring, reward contingencies, feedback and self-evaluation are strategies used to enhance motivation, self-efficacy, and achievement.

The triadic reciprocal model “predicts that academic competence develops initially from social sources and subsequently shifts to self-sources in a series of levels” (Schunk, 2001a, p. 142). The first level of development is observational where social influences of models and verbal descriptions assist the novice learner. The second level, emulative, occurs when the learner patterns his or her performance based on the model. Once the learner’s performance approximates the model the learner moves to the third level, self-controlled. During the self-controlled level the learner internalizes the strategies or skills of the model prior to reaching the self-regulated level where learners can modify strategies and skills to meet changing contextual and personal goals. It is relevant to note, “self-regulation does not mean social independence....[it] is not a stage model, and learners may not necessarily progress in this fashion” (p. 144).

Structuring a study on Zimmerman's cyclical three-phase self-regulation model, Bembenuddy (2001) found students' goal setting and reward possibilities act as a positive mediator between self-efficacy and student study time. Goal setting motivates people to put forth energy needed over time to meet obligations while directing their behavior toward self-monitoring and selecting appropriate strategies that will enhance self-efficacy and lead to attainment of goals (Schunk, 2001b). Inconsistency in performance, real or imaged, and goal attainment can enhance effort if self-efficacy is high or lead to relinquishing the goal if self-efficacy is low. According to Schunk goals must have explicit performance criterion, be viewed as attainable within a reasonable amount of time, and the level of difficulty of the task must be realistic if self-regulation is to improve.

The use of metacognitive strategies is an important part of self-regulation. Talbot (1997) explored the teachers' role in mediating SRL for college students and found that teachers' often lack the skills for teaching self-regulation. The study found students whose efficacy beliefs are low tend to gauge learning in a performance mode rather than a learning mode. Teachers' attempts at motivating students who have a propensity toward performance often fail because teacher strategies do not align with the orientation of the performance centered student (Talbot, 1997).

The role of the teacher in teaching strategies to self-regulate either overtly or covertly in distance learning platforms is relevant to retaining distance learners. Early research in online course design quickly found in order for many students to succeed in distance learning, self-regulation strategies were often a critical component to success (Rogers & Laws, 1997).

Distance Learning

There are over 6 million people enrolled in 2-year institutions with an increase of 11% expected by 2012 (National Center for Education Statistics [NCES], 2003a). If the projected increase in enrollment materializes, many of the existing facilities at community college campuses will be unable to meet the classroom demand. One way to meet the increasing demand of enrollment is by transforming the traditional face-to-face course into distance learning courses.

The popularity and access of computers and the Internet has created an expansion of distance learning opportunities. According to the NCES (2003b) there are approximately 147 million internet users out of which 3.4% use the internet for online courses. The persistent evolution of technology offers new ways to serve community college students by offering Internet and Web-CT based (and similar platforms) distance learning opportunities.

The *community* in community college places a big responsibility on the shoulders of community colleges across America to meet the needs of the community. One of the needs is to stay abreast of changing trends in market conditions and the technology that drives our global society. For example, the number of people who use computers at work has grown over 8% from 1993 to 2001 with Internet and e-mail reported as the highest percentage use of work computers; more than word processing, publishing, spreadsheet software, and database use (NCES, 2002b).

Distance learning is not a new concept rather it is an evolved concept of teaching and learning. During the Great Depression years the community college (then called junior colleges) experienced a remarkable growth spurt with the help of newly created

federal agencies and their respected programs. Federal money was being channeled into the community by these agencies to create opportunities that would help Americans get back to work. In an effort to train workers, the Federal Emergency Relief Administration created emergency junior colleges that were often housed in local high schools. One of the most well received programs introduced during this time was a distance learning program offered by Ohio State University known as the Emergency Junior Radio College. The Emergency Junior Radio College provided an opportunity for registered students across the state to tune-into their radio for class lecture and then travel to a nearby high school to partake in classroom style discussion (Witt, Wattenbarger, Gollattascheck, & Suppiger, 1999).

The shift from radio to television began in the late 1940s and early 1950s when such institutions as the University of Michigan and American University began using televised instruction (Schwitzer, Ancis, & Brown, 2001). The introduction of the videocassette recorder provided another popular format for community college distance learning programs. In 1972, Dallas County Community College District led the way in telecourse production (Tulloch, 2000). In the late 1970s when cable television was sweeping across the nation, local government agencies in charge of allowing cable companies access required cable companies provide a public access channel for community members. This policy, in concert with numerous television channels that became available to local citizens who subscribed to cable television, provided another venue for community college course offerings.

In the early to mid 1980s, the computer began to take a stronghold in workplace settings across America and soon thereafter, homes were being equipped with desktop

computers and eventually, the Internet. Widespread use of the computer presented community colleges with an opportunity to develop and train citizens in the growing field of computers and by the mid-1990s the Dallas County Community College district was developing software platforms and learning programs for use over the Internet (Tulloch, 2000). Computer and Internet use at work, at home, and at school is becoming, if not already, a commonplace necessity. For example, an increase in computer use at two-year colleges has risen approximately 28% from 1993 to 2001 with 69% of students using a home computer for community college school work (NCES, 2003c).

The opposition from students to learn technology and the considerable investment of faculty time without compensation are barriers in the modification of technology (Leider, 1998; Zeszotarski, 2000). Students having access to technology can create what McKinney (2001) refers to as a divide between the “techno-rich and the techno-poor” (p. 2). One can argue that there is digital inequity thereby hampering digital access. Consideration must also be given to cultural and skill differences among users (Zeszotarski, 2000), and who will have access to the technology (Parrott, 2001).

The computer and Internet has accelerated distance learning opportunities on one hand while increased enrollment and student demand for distance learning have accelerated it on the other hand. The increase in demand is prompting community colleges to offer more classes in distance learning formats including public speaking or speech.

Self-Regulation and Distance Learning

Today many teachers are enhancing the traditional face-to-face classroom experience with ancillary web-based instruction. Self-regulation components embedded

in web-based instruction can assist students with learning in this mode of instruction. Cennamo and Ross (2000) found when self-regulation strategies were incorporated in a college child development web-based course, self-efficacy, and self-regulation increased while anxiety decreased. Azevedo and Cromley (2004) found when college students learning the circulatory system with hypermedia are trained in self-regulation (using the four-phase model of self-regulation used in earlier studies by Pintrich, 2000; and Hadwin & Winne, 2001) learning of complex topics is enhanced.

The self-reflective process is an important component in self-regulation. van den Boom, Paas, van Merriënboer, and van Gog (2004) investigated the use of prompts in a college teacher training web-based learning environment and found when prompt and tutor feedback were related to build self-regulated behavior, learners perceived prompts as less bothersome. The role of feedback by self and others is another important component of self-regulation. Zappe, Sonak, Hunter, and Suen (2002) examined a web-based self-selected information feedback system available to junior high schools students and parents and found higher selection among motivated, higher academic achieving students.

To activate self-regulation, a distance learning course should be designed to treat metacognition and affect as an end product whereby learners have the opportunity to engage in the self-monitoring and self-motivational strategies (McMahon & Oliver, 2001). Boekaerts (1999) advocates having students write goal statements as it may lessen the dependency of the learner on the teacher, assist the learner in acquiring self-regulation skills, and direct the learner to metacognitive awareness of skills.

Self-regulation is concerned with how students use and adapt strategies to various learning environments. The distance learner who is self-regulated may be more likely to adapt and have available the skills needed to transform their learning in new environments; just as the learner will more likely adapt to learning in various disciplines. However, if we understand that self-regulation does not occur in all situations then this leaves an opportunity for educators in distance learning to understand the factors involved in what is clearly an academic environment that requires students to have available self-regulated learning strategies and to be self-regulated.

The degree of the learners' experience in taking distance learning courses (learners with less or no experience compared to those who are adept in the distance learning environment) has important curricular design implications. For example, goal setting may be a more effective method in helping the novice distance learner build self-efficacy and self-regulate in the new learning environment. Boekaerts (1999) supports preliminary instruction of self-regulatory skills in the non-traditional learning environments because of the "bidirectional relationship between learning environments and self-regulated learning" (p. 453).

Research shows the role of the teacher in student self-regulating is dualistic. Martin (2004) puts forward that the dualistic nature in teacher-student, cognitive-behavioral practices that occur under the social cognitive umbrella are unnecessary and are in conflict with Bandura's definition of personal agency (the ability to make and act on decisions). Others (Schunk & Zimmerman, 1997; Zimmerman, 1995) believe that metacognitive, cognitive strategies and behavioral components cannot be separated from self-regulation as it is an interactive process.

Boekaerts (1995; 1997; 2002) views self-regulated learning needing constant modification as the learner moves from one content area to another and where the socio-emotional goals are not ignored. Socio-emotional and academic goals should be a construct of self-regulation theory where the whole-person is studied (Boekaerts, 2002). Boekaerts supports teachers incorporating self-regulated skill concepts into the curriculum such as how to self-manage and metamotivate (the ability of the learner to motive control and action against competing scenarios). Currently, there may be difficulty in determining the interaction between socio-emotional and academic goals in the distance learning environment without methods of measurement being in place that can signal deficiency in self-regulation of the learner. For example, how does one measure socio-emotional goals of a first year college student away from home for the first time and the impact this may have on their affective state.

Today's community college classroom promotes students taking responsibility for their own learning and at the center of self-regulation is self-directing (Butler, 2000). Lemos (1999) promotes flexibility measures in relation to goals and self-managing strategies of the learner as a means to controlling learner beliefs and motivation; which she views as cyclical.

Public Speaking and Distance Learning

Aristotle, the father of rhetoric, and his followers saw public speaking as fundamental to achieve the greatest good for society and the state (Morreale & Backlund, 2002). Centuries later Vygotsky (1934/1986) argued greater oral aptitude adds to the development of intellectual and reasoning abilities. According to Reid (2002), the early speech classes of the 1930s and 40s focused on the "noun" of speech. Since that time

public speaking has evolved to include society, interpersonal and intrapersonal aspects of the communication process. Morreale and Hackman (1994) reason public speaking promotes logical thinking and organization of ideas and the public speaking curriculum must consider cognition, behavior, affect, and ethics over performance. Mino (1996) supports a public speaking curriculum that focuses on the practical contexts rather than focusing on the theoretical and mechanical aspects of public speaking. Nicosia (1997) advocates public speaking across the curriculum to enhance student learning and communication skill and validates his position by citing a New York Times article that reported employers placing communication skills second to attitude when assessing new hire attributes.

The need to teach public speaking is supported from professionals and those in academia alike. Parvis (2001) states the ability to speak in public is not only an asset but a required skill in the broader job market as well as in the world of academia. Generally defined, a public speaking course provides students with the practical experience that prepares them academically, professionally, and personally. A course in public speaking is one approach to developing college students' oral competency but can such a competency be developed through distance learning?

Minimal research has been conducted on public speaking as a distance learning course but the National Communication Association (NCA) supports and offers workshops in teaching public speaking in the distance learning formats (Carr, 2000b; Hanson & Teven, 2004). After attending a NCA workshop, Hanson and Teven (2004) developed a public speaking course at West Texas A&M University and found students enrolled in online and traditional face-to-face courses scored as well on speaking

assignments. The study also found students enrolled in online courses reported higher communication apprehension and cited the reason may be due to lack of interaction and students being older than those registered in the traditional course. Clark and Jones (2002) compared communication apprehension and public speaking abilities in a traditional course and online public speaking course and found no significant differences. However, the most salient factor in choosing the traditional rather than the online course for females was the desire for face-to-face interaction.

The same reasons that attracted rural students, time-restricted students, and others to earlier forms of distance education are the same reasons that have and will continue to attract students to the established and more advanced forms of distance education. Distance education satisfies traditional and nontraditional students who are characteristically motivated working adults who value the convenience and flexibility that enables them to balance numerous life commitments (Parrott, 2001).

Learning-centered Community College

Over the last decade there has been a shift toward the creation of learning-centered community colleges (Minkler, 2002). The concept of a learning-centered college is rooted in learning research, technological advancements, the push toward accountability, and tried business models (O'Banion, 1997). Student learning is the primary concern at learning colleges. According to O'Banion one of the key principles of a learning college is to engage and make students responsible for their own learning where teachers facilitate learning in a collaborative environment.

The move away from instructional teaching to a learning model where collaborative learning activities are taking center-stage, where teachers are facilitators of

learning, and where learning outcomes can be documented for accountability, is rapidly influencing and changing the community college structure. The goal of creating a community of learners is to enhance student learning through effectively creating a culture that develops the agent of learning, and more ambitiously, measures student learning outcomes. Valencia Community College monitors its strategic plan by creating goal teams who are responsible for evaluating and reporting on the college's effectiveness of placing learning first (McClenney, 2003). According to Minkler (2002) higher grade point averages and the sense of community that comes with learning communities promote student success and retention.

Student Characteristics

Enrollment at community colleges increased 14% from 1990 to 2000 (NCES, 2002a). Community colleges enroll the largest number of first-generation, low-income students, Hispanics, African-Americans, and Native Americans (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005a). Community colleges will continue to enroll more immigrants, first-generation students, and disadvantaged students because of the open-door admissions policy and low-tuition. According to the NCES (2002a) a 15% increase in the traditional college-age population of 18- to 24-year-olds is expected in degree-granting institutions from 2000 to 2012. This "Net Generation" or "Millennial Generation," born between roughly 1980 and 1994, have been defined as smart, impatient, and carry portable electronic devices for multi-tasking entertainment, learning, and communicating (Carlson, 2005). Additionally, these students are goal-oriented, are used to pressure, have high expectations, and have positive outlooks about what the

future has to offer (Lyons, McIntosh, & Kysilka, 2003). It is the largest and most ethnically diverse generation.

Students born between roughly 1962 and 1980 are classified as “Generation X.” These non-traditional students have a consumerism attitude, have been raised in a single parent home, have parents who have remarried and/or blended marriage, and have seen and felt the corporate downsizing movement (Lyons et al., 2003). Many of these students raised themselves by watching aggressive television and videos, have poor concentration, and desire to be entertained. The “Baby Boom Generation” characterizes students born roughly prior to 1962 and are non-traditional students either attending college for the first time or returning after a long period of time. Many have careers and families, are concerned with their ability to be a college student in today’s high technology society, yet have a tendency to become highly motivated, over-achievers (Lyons et al.). According to the NCES (2002a) enrollment projections, a net increase of 13% is expected among 25- to 29-year-olds, a net increase of 3% among 30- to 34-year-olds, and a decrease of 13% is expected among 35- to 44-year-olds from 2000 to 2012.

Non-traditional students will return or enroll in community colleges to satisfy the increasing number of employers requiring an educated skilled workforce. However, Byrd and MacDonald (2005) report open access for non-traditional and high-risk students is changing as standardized-test-based admissions are increasingly used to make decisions about college readiness.

According to the NCES (2002a) there are currently more females enrolled in college than males. Females will continue to outnumber males with a 57% share of enrollment. Analyzing the data from the NCES Integrated Postsecondary Education Data

System (IPEDS) annual surveys of all postsecondary educational institutions and the NCES Beginning Postsecondary Students Longitudinal Study 1996-2001, Bailey, Jenkins, and Leinbach (2005c) found 47% of all beginning postsecondary male students enrolled in community colleges in 1995-96.

Bailey, Jenkins, and Leinbach (2005b) summarize the National Education Longitudinal Study of 1988 (NELS: 88), a report summarizing information on education and job outcomes of participants. The eight year study followed a nationally representative sample of individuals who were eighth graders in the spring of 1988. Four follow-ups with a sample of respondents occurred during 1990, 1992, 1994, and 2000 making up the cohort members. Information from the cohort revealed: (a) 40% enrolled first in a community college, (b) 55% of Hispanic students chose the community college over four-year public colleges, (c) over half of the lowest two SES quartiles enrolled in community colleges, (d) over half of all first-generation students chose the community college, and (e) first-generation students were more likely to enroll in a certificate program vs. an associate degree program, and were more likely to take remedial courses. First-generation students in the NELS:88 study who were less prepared academically and for those who were considered well prepared academically (as defined by higher level mathematics courses in high school and high scores on achievement tests) were less likely to persist to degree attainment (Chen & Carroll, 2005).

Academic Preparedness

Sixty-three percent of students attending a community college take at least one remedial course (Adelman, 2004). Remedial education is defined as courses offered to help students advance academic skills to perform college-level work in reading, writing,

or mathematics (Jenkins & Boswell, 2002). At-risk, under-prepared, low-achieving, developmental, disadvantaged, non-traditional, and skill-deficient are used to describe remedial students (Saxton & Boylan, 2000). Whatever term is used, community colleges are responsible for the majority of remedial education in the United States, and the picture is becoming more austere. Approximately one-fifth of the states have taken steps to discourage public four-year institutions from offering remedial education (Jenkins & Boswell, 2002). Steps being taken to close the door on remediation at public four-year institutions include placing a ceiling on the number of remedial students admitted, elimination of state funding, and the eradication of remedial education programs.

The characteristics of current and projected student populations compound the severity of remedial education in the community college. A third of the student population at community colleges are ethnic minorities and it is projected by 2050 the minority population will increase to 47% (Szelenyi, 2001). For example, Hispanics, African-Americans, and Native Americans, and lower income students are all overrepresented in two-year institutions compared to public four-year institutions (Bailey et al., 2004). Hispanic undergraduate enrollment at two-year institutions increased by over 50% by the fall semester of 2002 (Bailey et al., 2004). The community college will be faced with an influx of ethnically diverse students requiring remediation in the coming years (Boswell, 2002). At a time when minority population and enrollment at community colleges is rising, a number of states are limiting or doing away with remedial courses. The costs associated with remediation and the notion of paying twice for identical courses is at the center of the funding debate (McCabe, 1998; Yamasaki, 2001). The costs associated with remediation are often misinterpreted. Students with lower academic skills

comprise a diverse population including recent high school graduates, returning students, degree seeking, non-degree seeking and vocational. The demographic characteristics of remedial students are wide-ranging and include many first-generation college students. State and institutional policies are intertwined as the debate continues. The continuous rise in students requiring remediation, the fall in monetary funds, and the extraordinarily critical civic demands have placed unsurpassed attention on remedial education (Grimes & David, 1999). However, “In some colleges, research suggests that students who start in developmental courses or programs persist and graduate at rates similar to those experienced by students who started in regular college-level courses” (Bailey et al., 2004, p. 6).

Proficiency test scores determine remediation enrollment status. Mandatory placement is required in 21 states. Only Maryland requires the completion of all remedial coursework prior to enrolling in college level courses. Seven states have state-mandated placement exams (Jenkins & Boswell, 2002). Opponents declare mandatory placement obstructs the open-access mission, prerequisites are discriminatory, and enrollment will drop with mandatory placement (Bundy, 2000; Hadden, 2000). The stigmatization that accompanies mandatory remediation results in higher attrition rates and promotes indifference toward student achievement (Kozeracki, 2002). Supporters give credence to mandatory placement because it promotes higher student success rates (McCabe, 2001). Amey and Long (1998) conducted research on remedial student success outcomes in relation to student attributes and institutional factors such as advising, placement and assessment. The researchers discovered mandatory assessment and early intervention helps student retention and success rates among degree-seeking students taking reading

and English developmental courses. Reading skills are fundamental for college and life success. Twenty-five percent of high school graduates entering college immediately following graduation are in need of reading remediation (Oudenhoven, 2002). Degree completion is diminished when a student requires reading remediation (Oudenhoven). Reading is a foundational skill for both writing and mathematic proficiency.

Institutional policies vary on mandating course sequencing. Students who are required to take remediation courses perform at or better than students who are not required to take remedial courses (McCabe, 2001). Students waiving remediation have lower credits earned and lower persistence rates (Hadden, 2000). Negative student perception and the risk for drop-out is greater with stand-alone remediation courses (Oudenhoven, 2002). However, the implication of integrating courses causes a greater risk to the prepared student, teacher, and institution (Oudenhoven). The goal behind early intervention programs is to ideally eliminate the need for remediation. Mandatory placement, mandatory assessment and course sequencing are efforts being made to increase student success and retain students.

Retention

Community college retention rates are difficult to define. Institutional and state policies impose their own formula in defining retention. Retention in distance learning courses compared to traditional courses is commonly higher. For example, Carr (2000a) reports Dallas Community College retention rates for distance education courses approximately 11 to 15% higher than traditional courses. Until the 1990s, the two-year college was missing from much of the research on retention or student persistence. Tinto's student departure theory first published in 1975 and often cited in research,

suggested students arrive at college with certain expectations and aspirations.

Assimilating or abating into the college environment affects student outcomes (Tinto, 1987). “The influence of institutional variables, such as faculty-student interaction, peer group interaction, and extracurricular involvement, help shape the students’ progression through college” (Metz, 2002). The criticism of Tinto’s model (Cabrera, Castaneda, Nora, & Hengler, 1992; Pascarella & Terenzini, 1991) for focusing on traditional-age students attending four-year institutions provided researchers an opportunity to expand on Tinto’s model. New variables continue to be introduced such as factors of financial aid (see Bers & Smith, 1991; Nora, 1990), race and gender (see Pascarella & Terenzini, 1991), and enrollment patterns (see Grosset, 1992). Building from Tinto’s and Bean’s models of retention, Andreu (2002) offers community college researchers a list of over 20 variables researchers may employ when investigating retention at the institutional level.

Attendance patterns have been found to influence student success in college (Horn & Carroll, 1996). Full-time and part-time enrollment is expected to rise another 19% among full-time and 10% among part-time students from 2000 to 2012 (NCES, 2002a). Community college students are more likely to work, attend part-time, and often delay enrollment from high school graduation or suspend time from college once enrolled. Delaying course completion by withdrawing from or repeating courses are higher among first-generation students (Chen & Carroll, 2005). These attendance patterns negatively influence degree completion (Adelman, 1999).

The large number of first-generation (i.e., students whose parents have never attended college) students enrolled at the community college poses additional risks to retention. Basic knowledge about postsecondary education, family income level,

academic preparation, and problems associated with transitioning from secondary school to college are some of the difficulties associated with first-generation learners (Pascarella, Wolniak, Pierson, & Terenzini, 2003). Chen and Carroll (2005) report first-generation students held lower GPAs in the first and continuing years (2.6 overall) compared to students whose parents held a bachelor's degree or higher (2.9 overall). Previous research has found the higher the first year GPA the more likely students will persist (McCormick, 1999). Chen and Carroll found notwithstanding background, preparation, and enrollment behaviors, higher credit-hours earned, higher GPA, and lower withdrawal or course repeats in the first year related positively to student completion or continuous enrollment.

High levels of student involvement at the institution is positively related to retention and learning (Tinto, 1987; 1997). Kuh, Gonyea, and Palmer (n.d.) define student engagement as activities traditionally associated with learning such as collaborating with peers on projects, and interacting with faculty. However, community colleges are often referred to as commuter schools where student involvement is limited due to the difficulty of students having the time to become involved in traditional campus activities (Chaves, 2003). Alternative solutions to retaining the community college student include orientation programs, peer and faculty mentoring programs, faculty development and other programs that promote relationships among students, faculty and the institution in general (Gabriel et al., n.d.).

Hoachlander, Sikora, Horn and Carroll (2003) investigated the goals, preparation and outcomes of community college students using data from the 1996/01 Beginning Postsecondary Students Longitudinal Study (BPS:96/01), a representative sample of all undergraduates enrolled in postsecondary education for the first time in 1995-1996 and

interviewed six years later in 2001; the NELS88/2000 data set; and the 1999-2000 National Postsecondary Student Aid Study (NPSAS:2000), a representative sample of all students (regardless of entry time, degree stage or age) enrolled in postsecondary education during the 1999-2000 academic year. In all three data sets approximately 90% of community college students intended to transfer to a 4-year institution or obtain a formal credential out of which 75% intended on obtaining a bachelor's degree. About 20% of the NELS and BPS participants had earned an associate's degree. However, since many community college students attend college part-time it takes longer to earn a degree or certificate. Using the BPS surveys to measure the amount of time to complete an associate's degree, the average amount of time was roughly 3 ½ years, and of those seeking a bachelor's degree roughly 44% were still enrolled 6 years later. It took approximately 2 ½ years to earn a certificate.

Students enrolled in the community college have different reasons for enrolling in college and looking at retention from a course perspective (number of students enrolled in a course and evaluating number of students successfully completing the course) can provide useful data to a college. Gabriel et al., (n.d.) report course retention provides an extensive representation because it does not differentiate between full- and part-time students. Additionally, since many community college students come to class and then leave after the class is over, the faculty-student interaction influences student satisfaction with the college experience (Pace, 2001), student achievement, persistence, academic skill development, and personal development (Pascarella & Terenzini, 1997).

Distance Learning Retention

Retention issues can be a problem in both traditional and distance learning environments. Distance education participation rates are higher among non-traditional students, females, and those seeking associate's degrees (Sikora, 2003). "Since 84% of community college students work full- or part-time and many are single parents, flexible scheduling and broader access are appealing" (U.S. Department, n.d.). With the continuous rise in offering distance education (Internet-based technologies; two-way interactive video or audio; prerecorded video or audio), the need for safeguarding human contact is vital to distance education (Lyons et al., 2003). The Monroe Community College in Rochester, NY identified issues affecting and characteristics impacting online student retention. Three areas to managing the online program and increasing retention were identified: (a) managing expectations to include setting clear, repetitive course expectations and offering face-to-face and online orientation sessions; (b) managing support services available to students online; (c) manage academics focusing on faculty development in creating, delivering and teaching online (Gaide, 2004). Bellevue Community College and Edmonds Community College in Washington State found the flexibility of online courses draws students toward online learning while life and work situations often call for withdrawing from online learning (Lorenzetti, 2005). Providing students with technological support at any level and free e-mail are reasons West Hills Community College maintains a 70% online learning retention rate (Kincade, 2004). Sending each student a personalized welcome letter, holding synchronous online office hours, forming study groups, and requiring students to post weekly assignments has been

shown to increase course retention from 50% to 92% in a business law course offered at the University of Arkansas Community College at Hope (Online student, 2004).

Over 90% of public 2-year and 89% of public 4-year institutions offered distance education courses during the 2000-2001 academic year at Title IV-eligible, degree-granting institutions (Tabs, Waits, Lewis, & Greene, 2003). Additionally, 48% of total enrollment in distance education occurred at two-year public institutions, public two-year institutions were more likely to participate in some type of distance education consortium, and increasing access and enrollment were rated high among institutions offering distance education. Online courses are the epitome of a 24/7 class. Students will access information at various times and expect reasonable response times from the instructor. Monitoring, redirecting, responding, researching and posting links are time consuming instructional endeavors but technology addresses the “anyway, anyplace, anytime” tenet of the learning college (O’Banion, 1997, p. 70).

Potential obstacles for course retention and degree completion at community colleges may include the responsibility of work and family, being academically unprepared, having limited-English-ability, a first-generation student, an immigrant, and being economically disadvantaged (Hirose-Wong, 1999). Withdrawals (Ws), No-Credit Repeats (NCRs), fewer credit hours earned, delaying entrance into postsecondary education are just a few reasons for students not succeeding in college. Adelman (2004) reports, based on a study of college transcript records, Ws and NCRs rose among community college students from 12% to 16% from 1982 to 1992. Students with 7 or more Ws or NCRs not only take longer to complete a degree but bachelor’s degree attainment diminishes to roughly 25%. In the same report, 36% of students who earned

10 credit hours during the first year of college were more likely to transfer and students who earned accelerated credits during high school (dual-enrollment) spent 4.25 calendar years to complete a bachelor's degree compared to 4.65 calendar years.

The characteristics of students attending community colleges, the academic preparedness of students enrolling, and issues of retention continue to challenge the community college system.

CHAPTER 3: RESEARCH METHODS

Subjects and Setting

The population for this study consisted of students enrolled in one of six Fundamentals of Speech (public speaking) courses during the fall 2005 semester: two online, two telecourses, and two traditional (face-to-face), at Valencia Community College located in Orlando, Florida.

Fundamentals of Speech (SPC1600) is a 3-credit hour course required for the Associates of Arts degree and for many programs in the Associate in Science degree tracks. There are no pre-requisites for the course. The course is designed to enhance students' practical and theoretical understanding of verbal and nonverbal communication. Students are required to deliver a minimum of three individual speeches for grading over the 15-week semester. College-wide speech criteria have been established at the community college under study. All three instructors participating in the fall 2005 study were on the committee to formulate the speech criteria standards. According to M. Holzer (personal communication, June 8, 2005), the instructors' speech evaluation form (see Appendix A) has been tested for reliability and validity against the competency areas formulated by the college.

Courses cataloged as online do not require students to attend regular class sessions on-campus. Rather, they allow the learner to work through class material in a time constructed manner on a computer at a distance. Students enrolled in the online course were required to submit via mail or personal delivery an unedited videocassette recorded copy of a completed speech performed with a minimum audience number of

seven, all over the age of 16. Students who did not own or have access to video equipment could make an appointment on campus to have their speech recorded. Students enrolled in the online section had to have access to a computer and the Internet (e.g., from home or work) or students could use the on-campus computer lab. Students were required to access the course, submit assignments, participate in discussions through WebCT, and have a personal e-mail account or one through the college.

Courses cataloged as telecourses limit the number of on-campus visits required by the learner and expand the amount of course material to be covered through media viewing. The Fundamentals of Speech telecourse studied offered students several media viewing alternatives: (a) students could view telecourse videotapes on-campus at the Learning Resource Center, (b) students could rent the videotapes through a telecourse rental company, (c) students could watch the program as it aired on a local cable outlet, or (d) students could record the program when aired and viewed at a time set by the viewer. Students enrolled in the telecourse were required to be on campus at the videotaping lab on specific dates and times to deliver speech assignments. Students acted as speaker, and as an audience for each other during the videotaping sessions. Students submitted homework assignments at each speech taping session and provided a stamped, self-addressed envelope for the return of course assignments. Students were required to have a personal e-mail account or one through the college.

Students in the traditional courses were required to attend class, submit assignments, participate in class activities, and deliver all speeches during the regularly scheduled class dates and time. Students were required to have a personal e-mail account or one through the college. Student speeches were videotaped in the classroom by other

students. Videotaping is used as a means for delivering and grading speeches in the online and telecourse sections, and as a means for students to self-evaluate their speech performance in the telecourse and traditional course sections.

Valencia Community College

Valencia Community College (VCC), founded in 1967, serves a two county area in Central Florida, and enrolls over 57,000 students on four campuses (Just, 2003). In 1995, VCC became a learning-centered institution and in 2000 become one of 12 international Vanguard Learning Colleges designated by the League for Innovation in the Community College (Welcome, 2005).

During the 2004-2005 academic year the typical credit student was Caucasian and 21 years old. Roughly 58% were female, enrolled part-time, and 75% attended classes during the day. The average credit-hour enrollment for full-time students at the end of the 2004-2005 fall term was 12.9 credit hours, and 6.4 hours for part-time students (Statistical, 2005). The credit student profile can be found in Table 1.

Table 1

Credit Student Profile 2004-2005 (Annualized data)

Credit Students	
Enrollment (annual)	42,039
Gender	
Female	24,197 (57.6%)
Male	17,706 (42.1%)
Not Indicated	136 (0.3%)
Ethnicity	
African American	6,505 (15.5%)
Asian/Pacific Islander	2,374 (5.7%)
Caucasian	21,373 (50.9%)
Hispanic	9,033 (21.5%)
Native American	175 (0.4%)
Not Indicated	2,579 (6.1%)
Degree Status	
A.A. Degree	20,371 (48.5%)
A.S. Degree	7,594 (18.1%)
Awaiting Acceptance	3,142 (7.5%)
Non-Degree Seeking	10,931 (23.9%)
Not Indicated	1 (0.9%)

Course and instructor retention data for the Fall 2004, Spring 2005, and Summer 2005 for the online, telecourse, and traditional public speaking courses are presented in Appendix B, Table B1.

College-wide academic success rates for students enrolled in the public speaking courses during the Fall 2004, Spring 2005, and Summer 2005 are presented in Table 2.

Table 2

College-wide Academic Success (Historical Data)

	Fall 2004	Spring 2005	Summer 2005
Number Sections	112	106	63
Number Students	2798	2498	1230
F Grade	62	67	13
Withdraw	410	322	139
Withdraw-Pass	103	107	42
Withdraw-Fail	87	79	26
Incomplete	12	15	11
Letter Grade C or Above %	78.19%	78.89%	82.28%
Successful Completion	2124	1888	999
Successful Completion %	75.91%	76.19%	81.22%

Data Collection Procedure

All participants were asked to complete The Motivated Strategies for Learning Questionnaire (see Pintrich et al., 1991) answering questions about the way the student self-regulates, and to provide information about their age, gender, race, experiences with online and telecourses, reasons for taking the course, grade point average (GPA), and if

the student is a first-generation college student (see Appendix C1). The instrument was available on a dedicated password protected Web site for students enrolled in the online, telecourse, and traditional sections, and took 20 to 30 minutes to complete. Participants were asked to visit the Web site following delivery of his or her informative speech. The informative speech assignment was delivered in the middle of the semester, prior to the withdrawal deadline date, and followed two graded speech assignments.

Historical academic success data were collected on the online, telecourse, and traditional public speaking courses to include the following semesters: (a) fall 2004, (b) spring 2005, and (c) summer 2005 (see Appendix B, Table B2, B3, B4, B5, B6). Start and end of term enrollment data from the fall 2005 semester were collected from the online, telecourse, and traditional public speaking courses under investigation. Student informative speech grade (e.g., 86 total grade points out of 100) and final grade average were collected on participants who completed the MSLQ during the fall 2005 semester.

All students were offered 5 points of extra credit for participating in the study. An alternative means for extra credit was offered to students who elected not to participate in the study or for students who were under the age of 18.

Instrumentation

The Motivated Strategies for Learning Questionnaire

The Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report instrument consisting of 81 Likert scale questions designed to understand college students' motivation and use of learning strategies. The MSLQ endured five years of formal analysis as the researchers collected data from three Midwest institutions, a four-year public university; a small liberal arts college; and a community college. The

instrument was assessed using factor analysis, examining reliability coefficients, and correlation with measures of achievement (Pintrich et al., 1991). The self-reported responses are on a 7-point scale from “not at all true of me” to “very true of me.” Some items require reverse coding prior to scale construction. Negatively worded items are reverse coded to represent a positively worded item.

The MSLQ has fifteen different modular scales which can be used together or alone and “is designed to be used at the course level” (Pintrich et al., 1991, p. 5). The MSLQ is divided into two sections: motivation and learning strategies. The motivation scales are divided into value, expectancy, and affective components containing 31 questions in six subscales. The value component includes (a) intrinsic goal orientation, (b) extrinsic goal orientation, and (c) task value. The expectancy component measures (a) control of learning beliefs, and (b) self-efficacy for learning and performance. The affective component measures test anxiety.

The learning strategies scale contains 50 items in nine subscales and measures cognitive and metacognitive strategies, and resource management strategies. Cognitive and metacognitive strategies include (a) rehearsal, (b) elaboration, (c) organization, (d) critical thinking, and (e) metacognitive self-regulation. The resource management strategies measure (a) time and study environment, (b) effort regulation, (c) peer learning, and (d) help seeking.

One motivation subscale and two learning subscales were used for this study. The alpha reliability coefficients reported by Pintrich et al. (1991) are: (a) motivation subscale, self-efficacy for learning and performance (Alpha .93), (b) the learning strategies subscale, metacognitive self-regulation (Alpha .79), and (c) critical thinking

(Alpha .80). The subscales and their relationships to academic performance and course retention were investigated using the MSLQ.

Self-efficacy for learning and performance measures expectancy for success and self-efficacy. Expectancy for success refers to one's task performance expectations. Self-efficacy for learning and performance measures how one judges his or her task ability, and the confidence one has in having the skills to perform the task (Pintrich et al., 1991). There are eight questions measuring self-efficacy for learning and performance.

Metacognitive self-regulation measures "the control and self-regulation aspects of metacognition" rather than the knowledge aspect of metacognition (Pintrich et al., 1991, p. 23). Three metacognitive processes were measured: (a) planning includes goal setting and task analysis activities that work to stimulate relevant prior knowledge, (b) monitoring assists with integrating new knowledge with existing knowledge through self-imposed activities, and (c) regulating plots a course for adjusting one's cognitive behavior in an effort to improve performance. Twelve questions measured metacognitive self-regulation.

"Critical thinking refers to the degree to which students report applying previous knowledge to new situations in order to solve problems, reach decisions, or make critical evaluations with respect to standards of excellence" (Pintrich et al., 1991, p. 22). Five questions measured critical thinking.

Demographic data were collected with the MSLQ to include, gender, age, ethnicity, experience with online and telecourses, reasons for taking the public speaking course, GPA, and if, the learner was a first-generation college student.

Data Analysis

Data obtained were analyzed using the statistical software Statistical Package for the Social Sciences (SPSS), version 11. First, internal consistency reliability (Cronbach's Alpha) and the maximum likelihood estimation procedure, using Kaiser's rule, was used to extract the factors from the variable data. Using this rule, 6 factors were extracted in the motivation scale. Together they are capable of explaining 66.73% of all the variables. Nine factors were extracted in the learning strategies scale, explaining 76.86% of all the variables. Second, the data were summarized through descriptive statistics. Third, regressions were performed on each motivation and learning strategies subscale (self-efficacy, self-regulation, critical thinking) and final course grade, informative speech grade percentage, and course completion to demonstrate predictive validity. Fourth, analysis of variance (ANOVA) was run to determine differences among self-efficacy, self-regulation, and critical thinking as a function of course type (online, telecourse, traditional).

CHAPTER FOUR: FINDINGS

Results

The purpose of the study was to investigate the relationships among self-efficacy for learning and performance, critical thinking, metacognitive self-regulation, and academic performance and course retention. The purpose of this chapter is to report the results of the study. Statistical data analysis is presented in the following sections, including descriptive statistics, reliability, factor analysis, regressions, analysis of variance, and findings for each research question. Tables are double or single-spaced in an effort to keep tables on one page.

Characteristics of Study Sample

Fifty-seven (41%) valid responses were collected from the possible 140 Valencia Community College (VCC) students who registered for SPC 1600 (Fundamentals of Speech) during the fall 2005 semester. Sixty students completed the MSLQ however 3 subjects were not registered in the proper course section and were removed from the data resulting in 57 participants in the study. In comparison to the online and traditional course sections, the telecourses had the highest number of female participants (86.4%), the largest number of 18-24 years old (90.9%), and the most African American (22.7%) students. The online course sections had the highest 25-39 years old (52.9%) and the most Caucasian (58.8%) students. The traditional sections had the only students in the 40+ year old (16.7%) category. Demographics of the sample (course type, gender, age, and ethnicity) are presented in Table 3.

Table 3

Descriptive Statistics of Variables among whole Participants (N = 57)

	Online	Telecourse	Traditional	Total
Gender				
Male	7 (41.2%)	3 (13.6%)	9 (50%)	19 (33.3%)
Female	10 (58.8%)	19 (86.4%)	9 (50%)	38 (66.7%)
Age				
18-24	8 (47.1%)	20 (90.9%)	9 (50%)	37 (64.9%)
25-39	9 (52.9%)	2 (9.1%)	6 (33.3%)	17 (29.8%)
40+			3 (16.7%)	3 (5.3%)
Ethnicity				
African American	2 (11.8%)	5 (22.7%)	3 (16.7%)	10 (17.5%)
Asian/ Pacific Islander	1 (5.9%)	1 (4.5%)	3 (16.7%)	5 (8.8%)
Asian American	1 (5.9%)	1 (4.5%)		
Caucasian	10 (58.8%)	8 (36.4%)	9 (50%)	27 (47.4%)
Hispanic	1 (5.9%)		2 (11.1%)	3 (5.3%)
Other	2 (11.8%)	7 (31.8%)	1 (5.6%)	10 (17.5%)
Total	17	22	18	57

Participants were asked to respond to a question regarding previous experience with online learning and a question regarding previous experience with telecourse learning (see Appendix C1). Forty-one percent of the participants registered for the online sections had previously taken 3 to 4 online courses. Over 90% of the telecourse

participants had no previous experience with telecourses or online learning. Results are displayed in Table 4.

Table 4

Descriptive Statistics of Experience with Online and Telecourse among whole Participants (N = 57)

Experience	Online	Telecourse	Traditional	Total
Online				
No Previous	5 (29.4%)	20 (90.9%)	6 (33.3%)	31 (54.4%)
1 to 2 Previous	5 (29.4%)	2 (9.1%)	6 (33.3%)	13 (22.8%)
3 to 4 Previous	7 (41.2%)		6 (33.3%)	13 (22.8%)
Telecourse				
No Previous	14 (82.4%)	20 (90.9%)	14 (77.8%)	48 (84.2%)
1 to 2 Previous	3 (17.6%)		4 (22.2%)	7 (12.3%)
3 to 4 Previous		2 (9.1%)		2 (3.5%)

Participants were asked to respond to 7 yes-no questions (see Appendix C1) regarding the reasons for taking the course. All participants recognized the Fundamentals of Speech course as a general education requirement. A majority of participants acknowledged the course will be useful to their career (44) and useful in other courses (37) however, only 23 of the 57 participants responded positively (yes) when asked about the content being interesting. Fifteen (38%) of the respondents identified him or herself as a first-generation college student. Results are displayed in Table 5.

Table 5

Descriptive Statistics of Reasons for Taking Fundamentals of Speech

	Yes	No
Fulfills general education requirements	57	
Content seems interesting	23	34
Will be useful to me in other courses	37	20
Will be useful to me in my career	44	13
Fit into my schedule	40	17
Recommended by a friend	10	47
Are you the first in your family to attend college	15	42

Participants were also asked to self-report current GPA (grade point average). On a 4-point scale, 2 (3.5%) participants stated his or her GPA between 1.0 and 1.99 (Mostly D's). Nineteen (33.3%) participants stated his or her GPA between 2.01 and 2.99 (Mostly C's). Twenty (35.1%) participants stated his or her GPA between 3.00 and 3.5 (Mostly B's). Thirteen (22.8%) participants stated his or her GPA between 3.51 and 4.0 (Mostly A's). Three (5.3%) participants did not report GPA (N = 54).

Reliability

The motivation and learning strategies scales of the MSLQ were tested for reliability. Items 33, 37, 40, 52, 57, 60, 77, and 80 were reverse coded before scale construction to reflect positively worded versions of the items. The motivation scales are divided into value, expectancy, and affective components containing 31 questions in six

subscales. The value component includes (a) intrinsic goal orientation (IGO), (b) extrinsic goal orientation (EGO), and (c) task value (TV). The expectancy component measures (a) control of learning beliefs (CLB), and (b) self-efficacy for learning and performance (SELP). The affective component measures test anxiety (TA). Respondent ratings of the motivation scales obtained from the MSLQ were judged to be fairly reliable for the undergraduate students to whom it was given (Alpha .88). The subscale SELP (Alpha .90) is slightly lower than the coefficient (Alpha .93) reported by Pintrich et al. (1991, see Appendix C, Table C2).

To understand the factor structure underlying the motivation scales, the maximum likelihood estimation procedure was used to extract the factors from the variable data. Kaiser's rule was used to determine which factors were most eligible for interpretation because the rule requires that a given factor is capable of explaining at least the equivalent of one variable's variance. Using this rule, 6 factors were extracted. Together they are capable of explaining 66.73% of all the variable variances. The factors extracted from the motivation scale (see Appendix C, Table C3) suggest that 6 factors group the items in a theoretically understandable way. A proper solution was attainable through maximum likelihood, as it was capable of converging in 10 iterations. Because the difference in Pintrich et al.'s (1991) sample size ($N = 380$) and the small sample size of this study ($N = 57$), the item and scales from Pintrich et al. was used for analysis.

The learning strategies scale contains 50 items in nine subscales and measures cognitive and metacognitive strategies, and resource management strategies. Cognitive and metacognitive strategies include (a) rehearsal (RH), (b) elaboration (ELB), (c) organization (ORG), (d) critical thinking (CT), and (e) metacognitive self-regulation

(MSR). The resource management strategies measure (a) time and study environment (TSE), (b) effort regulation (ER), (c) peer learning (PL), and (d) help seeking (HS). Respondent ratings of the learning strategies scale obtained were judged to be reliable for the undergraduate students to whom it was given, with a reliability coefficient of alpha .91. The learning strategies subscale, metacognitive self-regulation (Alpha .76) is slightly lower (Alpha .79) than the coefficient reported by Pintrich et al. (1991). Critical thinking (Alpha .68) is not as strong as the critical thinking (Alpha .80) coefficient reported by Pintrich et al. (see Appendix C, Table C2).

To understand the factor structure underlying the learning strategies scales, the maximum likelihood estimation procedure was used to extract the factors from the variable data. Kaiser's rule was used to determine which factors were most eligible for interpretation because the rule requires that a given factor is capable of explaining at least the equivalent of one variable's variance. Using this rule, 9 factors were extracted. Together they are capable of explaining 76.86% of all the variable variances. Reviewing the rotated component matrix suggests that 9 factors group the items in a theoretically understandable way. A proper solution was attainable through maximum likelihood, as it was capable of converging in 16 iterations (see Appendix C, Table C4). Because the difference in Pintrich et al.'s (1991) sample size ($N = 380$) and the small sample size of this study ($N = 57$), the item and scales from Pintrich et al. was used for analysis.

Research Question 1

To what extent do self-efficacy, self-regulation, and critical thinking predict academic success (defined as the final percentage grade awarded to the student)?

A regression was performed to predict students' academic success based final course grade and his or her self-efficacy, self-regulation, and critical thinking. The resulting regression equation was:

$$\text{Final Grade} = 68.70 + 3.32 (\text{self-efficacy}) - 2.29 (\text{critical thinking}) + 1.69 (\text{self-regulation})$$

The equation accounts for 29% of the variance in final grade ($R = .536$, $F = 6.44$, $df = 3, 48$, $p < .05$). When self-efficacy increases by 1, holding all others constant, final grade increases by 3.32. When critical thinking increases by 1, holding all others constant, final grade decreases by 2.29. When self-regulation increases by 1, holding all others constant, final grade increases by 1.69. Regression results are presented in Table 6.

Table 6

Summary of Final Grade Regression Analysis (N = 52)

Variable	B	SE B	t	p
Constant	68.70	5.45	12.60	.000
Self-Efficacy	3.31	.848	3.10	.000
Self-Regulation	1.69	1.25	1.35	.183
Critical Thinking	-2.28	1.02	-2.24	.030

Note. $R^2 = .287$.

A correlation was performed among final course grade percentage and the variables (self-efficacy, self-regulation, and critical thinking). When final grade is correlated with self-efficacy there is a significant relationship ($R = .458$, $p < .01$). There is also a significant relationship ($r = .714$, $p < .01$) between self-regulation and critical thinking. Table 7 presents the findings.

Table 7

Correlation Analysis of Final Grade and Self-Efficacy, Critical Thinking, Self-Regulation

	Self-Efficacy	Critical Thinking	Self-Regulation	Final Grade
Self-Efficacy	1			
Critical Thinking	.196	1		
Self-Regulation	.173	.714	1	
Final Grade	.458	-.135	.037	1

Note. $p \leq 0.01$

Research Question 2

To what extent do self-efficacy, self-regulation, and critical thinking predict informative speech grade average?

A regression was performed to predict informative speech grade average based on students' self-efficacy, self-regulation, and critical thinking. The resulting regression equation was:

$$\text{Informative Speech Grade} = 72.55 - 3.23 (\text{self-regulation}) + 1.77 (\text{critical thinking}) + 3.05 (\text{self-efficacy})$$

The equation accounts for almost 14% of the variance in final grade ($R = .370$, $F = 2.804$, $df = 3, 53$, $p < .05$). When self-regulation increases by 1, holding all others constant, informative speech grade decreases by 3.23. When critical thinking increases by 1, holding all others constant, informative speech grade increases by 1.77. When self-efficacy increases by 1, holding all others constant, informative speech grade increases by 3.05. Table 8 presents the regression table.

Table 8

Summary of Informative Speech Grade Regression Analysis (N = 57)

Variable	B	SE B	t	p
Constant	72.55	8.36	8.67	.000
Self-Efficacy	3.05	1.26	2.42	.019
Self-Regulation	-3.23	1.95	-1.68	.098
Critical Thinking	1.77	1.64	1.09	.283

Note. $R^2 = .137$.

A correlation was performed among informative speech grade and the variables (self-efficacy, self-regulation, and critical thinking). When informative speech grade is correlated with self-efficacy there is a significant relationship ($R = .137, p < .05$). No other variable was a statistical significant predictor of informative speech grade.

Research Question 3

To what extent do self-efficacy, self-regulation, and critical thinking predict course completion in the three instructor modes (online, telecourse, and traditional public speaking courses)?

A regression was performed to predict self-efficacy, self-regulation, and critical thinking based on course completion. No variable was a statistically significant predictor of course completion in the three instructor modes.

Fifty-one students registered for the online course, 38 students registered for the telecourse, and 51 students registered for the traditional course. At the end of the semester 30 (58%) students enrolled in the online section completed the course and 17 (33%) completed the MSLQ. Twenty-six (68%) students enrolled in the telecourse

section completed the course and 18 (47%) completed the MSLQ. Forty-five (88%) students enrolled in the traditional section completed the course and 22 (43%) completed the MSLQ. Of the 140 students who registered, 101 (72%) completed the course and 57 (41%) completed the MSLQ.

Of the students who completed the MSLQ, 3 of the 17 online students elected to withdraw from the course. One of the 18 traditional students received a WF (withdraw fail) grade. One of the 22 telecourse students received a WP (withdraw pass) grade. Extra credit (5 points) was offered to students who volunteered to participate in the study. However not all students elected to visit the dedicated Web site and participate.

Research Question 4

To what extent do self-efficacy, self-regulation, and critical thinking differ among students enrolled in online, telecourse, and traditional public speaking courses?

An analysis of variance (ANOVA) was performed to seek a mean difference between groups. There was no statistically significant difference ($F = .939, df = 2, 54, p > .05$) in instructional method when accounting for the nesting of self-efficacy, self-regulation, and critical thinking. Results are presented in Table 9.

Table 9

Differences in self-regulation, self-efficacy, critical thinking by course type

Variable	<i>df</i>	Mean Square	F	η^2
Self-Regulation	2	.141	.140	.057
Course Type Error	51	.975		
Self-Efficacy	2	1.089	.939	.082
CourseType Error	54	1.160		
Critical Thinking	2	.991	.838	.048
Course Type Error	51	1.379		

Note. Self-Regulation ($R^2 = .064$). Self-Efficacy ($R^2 = .113$). Critical Thinking ($R^2 = .078$).

Summary

This study investigated whether self-efficacy, self-regulation, and critical thinking could be predictors of final course grade, informative speech grade, course retention, and to observe any differences between self-efficacy, self-regulation, critical thinking and course type (online, telecourse, traditional).

Data was collected during the Fall 2005 semester at Valencia Community College. The MSLQ was available on a dedicated Web site housed on the University of Central Florida's server. Participants answered 81 questions on a 7-point Likert scale from "not at all true of me" to "very true of me." Ten demographic questions were asked. The participants were voluntary and extra credit was awarded for student participation. The sample was convenient rather than random.

The significant findings of this study are as follows:

- Self-efficacy was a predictor of final grade
- There is a relationship between critical thinking and self-regulation
- Self-efficacy was a predictor of informative speech grade

CHAPTER FIVE: CONCLUSION

This chapter is divided into four sections. The first section presents an overview of the study. The second section provides an analysis of the findings of the study according to each research question. The third section presents the conclusions. The fourth and final section provides recommendations for future research.

Overview of Study

The purpose of this study was to investigate whether metacognitive self-regulation, self-efficacy for learning and performance, and critical thinking could be identified as predictors of student academic success and course retention. Fifty-seven VCC students enrolled in either one of the two online, two telecourses, or two traditional Fundamentals of Speech (SPC 1600) courses selected for this study during the fall 2005 semester volunteered to participate in the study. Participants completed the MSLQ instrument and a demographic information questionnaire (see Appendix C1). The survey was available on a dedicated password protected Web site and took approximately 20 to 30 minutes to complete. Participants were asked to visit the Web site following delivery of his or her informative speech assignment. The informative speech assignment was delivered prior to the withdrawal deadline date and followed two graded speech assignments.

Informative speech grade average, final grade average, and course retention data was collected at the end of the semester. Two course sections from each learning mode (online, telecourse, traditional) were selected for this study. The same teacher taught both course sections in each learning mode.

Quantitative statistical analysis was used to investigate whether self-efficacy, self-regulation, critical thinking were predictors of academic success and retention. Also, to determine any differences in self-efficacy, self-regulation, critical thinking, and course type (online, telecourse, traditional).

Analysis of the Findings

This section provides an analysis of the findings presented in chapter 4 and discusses the importance of the findings according to each research question. Research question 1 and 2 will be discussed together.

Research Question 1

To what extent do self-efficacy, self-regulation, and critical thinking predict academic success (defined as the final percentage grade awarded to the student)?

A regression analysis was performed to predict students' academic success based on final course grade and his or her self-efficacy, self-regulation, and critical thinking. Self-efficacy was a significant predictor of final course grade ($N = 52$, $R = .536$, $p < .01$) however only 29% of the variance could be explained. While self-regulation and critical thinking were not significant predictors of final course grade a correlation analysis revealed a significant relationship ($N = 52$, $R = .714$, $p < .01$) between the two variables (self-regulation and critical thinking).

Research Question 2

To what extent do self-efficacy, self-regulation, and critical thinking predict informative speech grade average?

A regression analysis was performed to predict students' informative speech grade and his or her self-efficacy, self-regulation, and critical thinking. Self-efficacy was a significant predictor of informative speech grade with approximately 14% of the variance explained. Self-regulation and critical thinking were not significant predictors of informative speech grade. This may be due to the small sample size.

Research has shown that when one believes in his or her capabilities success is enhanced. The findings correspond with previous studies (Bandura, 1997; Bong, 2001; Schunk, 1990, 1991) that found when student self-efficacy is enhanced it relates positively to academic success. Self-efficacy theory suggests specific judgments relate to an individual's actual engagement in the task and learning. The judgment of self-efficacy is related to the goal, whether the goal is determined by the individual, task conditions, environment or their interaction (Linnebrink & Pintrich, 2003). Self-efficacy is acquired through positive or negative past experiences, vicarious experience (comparison of modeled behavior to self), verbal persuasion (positive or negative statements of performance), and emotional arousal or mood states such as anxiety, stress or arousal (Pajares, 2003). Because self-efficacy was a predictor of final course grade and informative speech grade it may be postulated that the teachers' are helping to build self-efficacy among the participants. Teachers' may create an environment where a combination of the primary four sources (past experiences, vicarious experience, verbal persuasion, emotional arousal) of building self-efficacy is employed and cognitively appraised (Bandura, 1986) by the learner.

Students' received the informative speech evaluation grading rubric prior to being evaluated on informative speech performance. The rubric provides learners with specific

goals and standards. Specific goals are expected to influence effort, increase learning, stimulate self-evaluation, and build self-efficacy (Schunk, 1990). This may help to explain why self-efficacy was a predictor of informative speech grade.

The findings revealed a relationship between critical thinking and self-regulation but not self-efficacy and final grade. Self-efficacy is a triadic reciprocal theory where behavioral, personal (cognitive, affective, and biological events), and environmental factors influence the bi-directionality of the factors. All factors are not equal in strength. It takes time for a casual factor to exert its influence and activate reciprocal influences. Self-regulated learning begins in a forethought phase that includes goal setting and strategic planning, implemented largely on the basis of self-efficacy (Zimmerman, 1998, 2002). This may help to explain why a relationship exists with self-regulation and critical thinking but not with self-efficacy, self-regulation, critical thinking and final course grade. For example, participants' may have a strong belief in his or her ability (based on self-judgment of one's goal) but may not be motivated to self-regulate and think critically. The sense of personal agency to regulate sources of personal, behavioral and environmental influences may not be at a reciprocal level (Schunk, 2001a). Another possible explanation is the relationship between self-regulation and critical thinking reveals an attempt by students' to become more active in his or her learning, engaging with the material at a deeper level yet it remains at the behavioral level. Correlation does not prove causality however it may indicate that a pattern of influence between self-regulation and critical thinking may be significant predictors among a larger sample size.

Self-regulation and critical thinking were not predictors of informative speech grade. This may be due to what Bandura (1977) observed "behavior is not a cause of

behavior” (p. 69), and “motivational and self-regulatory factors influence both prior and later performance attainments” (Pajares, 2003). Because self-efficacy judgments influence the choices students make, the effort they expend, the perseverance with which they approach new tasks, and anxiety they experience, higher self-efficacy beliefs of students may provide one explanation why high perception of efficacy outweighs self-regulation and critical thinking. Participants’ in this study may not have placed attribution for self-regulation (the confidence to use self-regulated learning strategies: planning, monitoring and regulating) and critical thinking (the confidence to solve problems, integrate new knowledge with existing knowledge, make decisions and evaluate against a standard) as a cause for the outcome (success). The results may also indicate that participants have fewer self-regulatory strategies available, hold lower intrinsic motivation, or have a lower need to engage in critical thinking. Task engagement can influence goal orientation (Schunk, 1990). If the learner perceived-goal progress positively without utilizing self-regulatory processes then he or she may not raise their standards, increase their motivation or change their behavior. The complex interactive processes involved in self-regulation may not be fully understood with a small sample size.

Research Question 3

To what extent do self-efficacy, self-regulation, and critical thinking predict course completion in the three instructor modes (online, telecourse, and traditional public speaking courses)?

A regression analysis was performed to predict course completion based on self-efficacy, self-regulation, and critical thinking. No variable was a statistical significant

predictor of course completion in the three instructor modes. The descriptive statistics for each construct are: self-efficacy ($M = 5.55$, $sd = 1.08$), critical thinking ($M = 4.18$, $sd = 1.17$) and self-regulation ($M = 4.18$, $sd = .97$). This may be due to the small sample size. Also, because students were asked to volunteer to complete the survey for extra credit, students who elected not to participate may be those students with whom the constructs of self-efficacy, self-regulation, and critical thinking may be better predictors of course completion in the three learning modes.

Only 47% of students who remained enrolled in all three course modes completed the survey and only 5 (8%) did not complete the course successfully (self-selected withdrawal, withdraw pass or withdraw fail). The largest withdraw came from the online courses with 3 (18%) of the 17 self-selecting to withdraw from the course after completing the MSLQ, and 30 (58%) of the 51 students officially enrolled in the online course retained. The highest course retention was the traditional sections (88%) however, the highest number of participants in the study (18 or 47%) were enrolled in the telecourse sections. Of the 140 students who registered, 101 (72%) completed the course and 57 (41%) completed the MSLQ.

The overall course retention rate was strongest in the traditional courses with 45 (88%) of the 51 students completing the course, followed by 26 (68%) of the 38 registered for the telecourse, and lastly, 30 (58%) of the 51 retained online. A general comparison of course retention from the fall 2005 semester with information collected from fall 2004, spring 2005, and summer 2005 for the three learning modes and the teachers reveal: (a) Teacher 1 (online) averaged 60.85% over the past three semesters teaching 4 online sections compared to a 58% retention rate during the fall 2005 semester

teaching 2 online sections, (b) Teacher 2 (telecourse) averaged 55.54% over the past three semesters teaching 8 telecourses compared to a 68% retention rate for the 2 courses studied during the fall 2005 semester, and (c) Teacher 3 (traditional) averaged 80.44% teaching 8 traditional courses over the past three semesters and 88% during the fall 2005 semester teaching 2 courses.

The course completion rate for the online sections was 58% and 68% for the telecourse sections at VCC. Carr (2000a) reports, of the 35 Internet-based courses offered at Tyler Junior College in Texas, 58% completed Internet-based courses, and 77% completed telecourses. At the University of Central Florida (the transfer school of choice among many VCC students), Web-based courses had a 9% withdrawal rate in the fall of 1998 compared to 5% in the traditional courses. The promotion of student engagement is often cited as a requisite to retaining students aligning with the theory of self-regulation.

Research Question 4

To what extent do self-efficacy, self-regulation, and critical thinking differ among students enrolled in online, telecourse, and traditional public speaking courses?

An ANOVA was performed to seek a mean difference between self-efficacy, self-regulation, critical thinking, and course type (online, telecourse, traditional). There was no statistically significant difference between self-efficacy, self-regulation or critical thinking based on course type. Less than 1% of variance in any dependent variable was accounted for by course type.

The small study population and small sample size within each learning mode (17 online; 22 telecourse; 18 traditional) may help to explain why there was no significant difference between self-efficacy, self-regulation, critical thinking based on course type.

The public speaking course is a required general education course and the lack of difference between the constructs and learning mode may involve students' perception of the class as close-ended (e.g., few choices given to students). Learners' experience with the course may be viewed as the same (predetermined tasks) regardless of learning mode (online, telecourse, traditional) where control is external thereby self-regulatory processes are not necessary in the situation (public speaking course).

Learners' may experience the course through product (performance orientation) goal setting versus process (mastery learning orientation) goal setting. Product goals often result in compliance behavior rather than self-directed behavior. Compliance behavior may inhibit motivation to initiate and regulate learning.

Zimmerman (2002) places forethought phase in the personal influence condition of his three-part cyclical model of self-regulation. Within the forethought phase is social modeling and goal setting. Social modeling includes self-efficacy, learning goal orientation, and intrinsic beliefs about learning. Social modeling allows the learner to internalize information transmitted in the social environment. Goal setting includes task analysis and planning. Goal setting is planned during the forethought phase and utilized during the performance phase (Schunk, 2001a). The forethought phase readies the learner for performance. The lack of significant difference may be manifested within the forethought phase. For example, participants may lack the behavioral skill, knowledge of self-regulated learning principles, and interest in the topic which are essential to self-regulation. The lack of difference in the constructs and course types may be due to the way students' engage in the forethought phase process. For example, students' in the distance learning modes (online and telecourse) may have fewer opportunities to choose

their learning goals and may have fewer social models to observe. The lack of social comparison (performance control phase) that communicates normative information that is used to evaluate one's capabilities (self-efficacy) may hurt perceptions of goal progress which enhances motivation for self-directed learning and skill acquisition (Schunk, 2001a).

While there was no statistical difference in self-efficacy based on course type, self-efficacy was a predictor of final course grade and informative speech grade. The type of attributional feedback may help explain why self-efficacy is a predictor of grades but not course type. Schunk (2001a) states,

Providing effort feedback for prior successes supports students' perceptions of their progress, sustains motivation, and increases self-efficacy for learning.

Feedback linking early success with ability (e.g., "That's correct. You're good at this.") should enhance learning efficacy. Effort feedback for early successes may be more credible when students lack skills and must expend effort to succeed. As they develop skills, switching to ability feedback sustains self-efficacy and self-regulation (p. 138).

Students had experience with delivering speeches and receiving feedback prior to taking the MSLQ. The type of attributional feedback may help explain why there was no difference between the variables of self-efficacy, self-regulation, critical thinking and course type.

Conclusion

Research has shown students with high self-efficacy as "more metacognitive, that is, more likely to plan, monitor, and regulate themselves while working on their school

tasks” (Linnenbrink & Pintrich, 2003, p. 130). Self-regulation and critical thinking were not significant predictors of final course grade and informative speech grade. However, self-efficacy was a predictor of final course grade and informative speech grade. This may indicate self-efficacy of participants led the students to be less engaged in learning because they believed they already knew the content. When students believe they do not need to engage in the learning process then cognitive and metacognitive strategies are less likely to be utilized. When this occurs, the advancement of a more accurate understanding of the discipline is diminished.

An alternative explanation may be a result of students’ overestimating their capabilities resulting in higher self-efficacy levels. Self-efficacy beliefs should be slightly higher than actual skill level but not to the extreme of miscalculating actual proficiency level (Bandura, 1977). Skill development, knowledge attainment, and use of learning strategies diminishes when self-efficacy and skill level are not accurately calibrated. The positive consequence with overestimating one’s capabilities is it may lead to behavioral engagement but the negative consequence is leading away from cognitive engagement (Linnenbrink & Pintrich, 2003). What this may mean for the public speaking curriculum is teachers may need to incorporate learning activities that promote cognitive and metacognitive strategies to more effectively engage the learner in the content of the discipline. It may also be advantageous to ask if the promotion of self-efficacy in the public speaking curriculum detracts from integrating cognitive and metacognitive approaches. If so, what can be done to continue to promote positive self-efficacy levels while engaging learners in cognitive and metacognitive processes?

The results of the study showed a relationship between critical thinking and self-regulation but no relationship with self-efficacy when investigating final course grade. Perhaps the practical (skill) aspect of the public speaking course, where self-efficacy may be enhanced through instruction, is either dominating the curriculum or dominating the curriculum through the informative speech assignment (when participants took the survey). Because participants took the survey following the informative speech assignment he or she may not have engaged in tasks that required adequate levels of critical thinking. If the participant judged the course tasks as not difficult he or she may have determined there being no need to self-regulate. In turn, if the curriculum is designed where learning occurs incrementally (building skill and knowledge through a series of expectation and feedback) this may help to explain self-efficacy as a significant predictor with final grade and informative speech grade. Wood and Bandura (1989) compared the effects of fixed entity and incremental ability beliefs with business school graduate students. The researchers found general expectations about learning can significantly affect personal interpretations of feedback and process. Beliefs about ability were related directly to learning or perceived self-efficacy. This may help to explain why critical thinking and self-regulation were not predictors of informative speech grade nor was there a relationship with self-efficacy. It may also help explain why a significant relationship emerged between critical thinking and self-regulation but not self-efficacy and final grade. Also, because self-regulated learning “seek to understand how students become adept and independent in their educational pursuits” (Paris & Paris, 2001, p. 89), the public speaking curriculum may not be allowing students to exercise autonomy and use appropriate learning strategies to self-regulate and think critically. For students to be

thoughtfully engaged in the learning task, instruction should not offer only superficial or low-level tasks (close-ended) perceived as busy-work but offer complex, challenging (open-ended) tasks that allow learners to use cognitive and metacognitive learning strategies. For example, an instructor may create a community of learners through collaborative activities but the activities fail to promote cognitive and metacognitive engagement.

No significant results were derived from self-efficacy, self-regulation, critical thinking as predictors of course completion. Several factors may help to explain this phenomenon. First, the small samples size of the study population. Second, the even smaller sample size of those who did not complete the course. The time the instrument was open for completion (following the informative speech assignment) may have hindered obtaining more participants in the study (the student dropped the course prior to having the opportunity to complete the survey). Having participants volunteer to take the survey earlier in the semester may produce a better sample size. Also, one could speculate that non-participating students may hold high self-efficacy beliefs regarding their capabilities to succeed in the course without extra credit. One could also speculate that non-participating students did not complete the survey due to low self-efficacy in their capabilities to succeed (“it won’t make a difference”) or the non-participant lacked the ability to plan and organize (self-regulate) him or herself to complete the survey within the deadline.

There was no statistically significant difference among self-efficacy, self-regulation, critical thinking and course type (online, telecourse, traditional). Product goal versus process goal orientation may be a reason for no difference in the variables and

course type. It may also be understood that the public speaking course can be taken in a variety of learning modes. The lack of difference may also be attributed to knowing that students may not self-regulate during their learning when they could. This is contradictory to most studies that show an affirmative relationship between self-efficacy, academic performance, and self-regulated learning

Recommendations for Future Research

Recommendations for future research are provided based on the findings of this study. To begin, the small size may have contributed to the non-significant results of this study. Increasing the sample size in all learning modes may present more significant results among the variables under investigation. Asking students to complete the MSLQ at the beginning of the semester may increase the number of participants in the study and it may significantly predict self-efficacy, self-regulation, and critical thinking as predictors of course completion. Extending the timeframe of the study past one semester or including other community colleges in the State of Florida who offer public speaking in the distance learning formats may also increase sample size.

Asking participants about his or her experience with public speaking may help to explain self-regulation and critical thinking as predictors of academic success (final grade and informative speech grade). Previous experience may indicate high or low self-efficacy and may help to explain the use or non-use of self-regulated learning strategies.

Introducing students to self-regulated learning strategies at the start of the semester may build efficacy to self-regulate, and formulate higher internal standards. Adding a student self-evaluation measurement variable may help explain self-regulation and critical thinking as predictors of final course grade and informative speech grade.

To explain the unexpected results found in this study with non-significant differences in self-efficacy, self-regulation, critical thinking and course type, further studies are needed. Investigating process and product goal orientation to examine cognitive task engagement may help explain effort and persistence. Attributional feedback which links students' goal progress with ability and effort may lead to significant differences among the variables and course type. Bandura (1986) stated, "Thought affects action through the exercise of personal agency. People use the instrument of thought to comprehend the environment, to alter their motivation, and to structure and regulate their actions" (p. 1). Personal agency involves people taking responsibility for their behavior, goals, resources, and effort (Schunk, 2001a). Personal agency compliments the learning-centered focus of VCC.

APPENDIX A: INFORMATIVE SPEECH EVALUATION FORM

NAME _____ Topic _____ (5-7 minutes)

Criteria	Description	Score	Comments
Introduction			
Attention getter	Effective use of attention getting strategy to capture listeners' attention and to effectively introduce topic.	4/	
Thesis Statement and Preview	Speaker clearly formulated and stated thesis statement during the speech introduction. Thesis statement identifies topic and encompasses/previews main points.	5/	
Relevance	Stated relevance of topic to audience needs and interests. Audience analysis reflected through choice of topic and supporting details.	6/	
Body and conclusion			
Depth of Content and Support	Depth of content reflects knowledge and understanding of topic. Main points adequately substantiated with timely, relevant and sufficient support. Accurate explanation of key concepts. Informative speech goal accomplished.	10/	
Visual Aids	Key concepts are effectively supported, clarified and enhanced with appropriate visual aids. Speaker demonstrates ability to use presentation media and follows basic presentation aids guidelines (visibility, clarity, layout, color). Able to adapt to unexpected circumstances, if applicable.	10/	
Language	Use of correct, clear, concrete and descriptive language to enhance audience understanding of message. Lack of noticeable vocalized fillers.	6/	
Credibility	Sources of information are clearly identified and properly cited. Establishes or explains authority of sources presented.	6/	
Organization	Effective organization. Main points are clearly distinguished from supporting details. Signposts are effectively used for smooth and coherent transitions.	5/	
Conclusion	Speech conclusion effectively summarizes main points and provides relevant and meaningful closing remarks.	3/	
Delivery			
Body language	Expressive, dynamic, and natural use of gestures, posture and facial expressions to reinforce and enhance meaning. Body language reflects comfort interacting with audience.	5/	
Vocal characteristics	Natural variation of vocal characteristics (rate, volume, tone, and pauses) to heighten interest and match message appropriately. Correct pronunciation and clear articulation.	5/	
Eye contact	Effective extemporaneous delivery . Consistent use of eye contact to establish rapport with audience. Inconspicuous use of speaker notes.	15/	
Documentation (speech preparation)			
Outline and works cited page	Outline and works cited submitted immediately after speech. Outline must be fully developed for full credit. Research citations should follow APA or MLA format.	20/	

TIME: _____

SUBTOTAL POINTS: _____

Penalties for exceeding time limit: _____ (2 points per 30 seconds over/under the time limit)

Late Speech Penalty _____ (-20 points) Late outline/works cited _____ (-5 points per day)

TOTAL POINTS: _____

APPENDIX B: BACKGROUND INFORMATION ON INSTITUTION

Table B1

Percentage of Students Retained in Fundamentals of Speech

Course Type/Teacher	Fall 2004	Spring 2005	Summer 2005
Online	58.16%	51.52%	
Teacher 1	64.0%	57.69%	
Telecourse	57.63%	55.93%	61.19%
Teacher 2	54.29%	51.16%	61.19%
Traditional	75.91%	76.19%	81.22%
Teacher 3	86.49%	85.26%	69.57%
Day	77.61%	77.25%	81.06%
Evening	70.08%	72.04%	81.58%

Note. Course Type represents institutional retention percentage. Teacher figure represents historical course retention percentage for each teacher participating in this study.

Table B2

Academic Success in Fundamentals of Speech (College-wide) Day Sections

	Fall 2004	Spring 2005	Summer 2005
Number Sections	90	83	44
Number Students	2251	1969	850
F Grade	50	44	6
Withdraw	299	231	92
Withdraw-Pass	86	98	35
Withdraw-Fail	58	61	19
Incomplete	11	14	9
Grade of C or Above	79.83%	79.83%	81.76%
Successful Completion	1747	1521	689
Successful Completion %	77.61%	77.25%	81.06%

Note. Successful Completion equates to a letter grade of D or above.

Table B3

Academic Success in Fundamentals of Speech (College-wide) Evening Sections

	Fall 2004	Spring 2005	Summer 2005
Number Sections	20	21	19
Number Students	498	465	380
F Grade	10	23	7
Withdraw	101	82	47
Withdraw-Pass	17	9	7
Withdraw-Fail	21	16	7
Incomplete			2
Grade of C or Above	72.09%	76.99%	83.42%
Successful Completion	349	335	310
Successful Completion %	70.08%	72.04%	81.58%

Note. Successful Completion equates to a letter grade of D or above.

Table B4

Academic Success in Fundamentals of Speech Online (Teacher 1)

	Fall 2004	Spring 2005	Summer 2005
Number Sections	3	75	
Number Students	1	26	
F Grade	2	1	
Withdraw	20	9	
Withdraw-Pass	2	1	
Withdraw-Fail	2		
Incomplete	1		
Grade of C or Above	66.67%	61.54%	
Successful Completion	48	15	
Successful Completion %	65.0%	57.69%	

Note. No Fundamentals of Speech online courses offered during summer 2005.
 Successful Completion equates to a letter grade of D or above.

Table B5

Academic Success in Fundamentals of Speech Telecourse (Teacher 2)

	Fall 2004	Spring 2005	Summer 2005
Number Sections	3	3	2
Number Students	59	59	42
F Grade			1
Withdraw	23	19	10
Withdraw-Pass	1	3	4
Withdraw-Fail	1	4	1
Incomplete			
Grade of C or Above	57.63%	55.93%	64.29%
Successful Completion	34	33	26
Successful Completion %	57.63%	55.93%	61.9%

Note. Successful Completion equates to a letter grade of D or above.

Table B6

Academic Success in Fundamentals of Speech Traditional (Teacher 3)

	Fall 2004	Spring 2005	Summer 2005
Number Sections	3	4	1
Number Students	74	95	23
F Grade	1		
Withdraw	8	8	3
Withdraw-Pass	1	3	3
Withdraw-Fail		2	1
Incomplete		1	
Grade of C or Above	87.84%	85.26%	69.57%
Successful Completion	64	81	16
Successful Completion %	86.49%	85.26%	69.57%

Note. Successful Completion equates to a letter grade of D or above.

APPENDIX C: MOTIVATED STRATEGIES FOR LEARNING
QUESTIONNAIRE INFORMATION

Appendix C1

Demographic Information

Demographic Information

1. Enter the Last 4 digits of your Valencia ID Number

2. Select the CRN number that represents the course you are currently enrolled in

14089 – Online, Professor Amy Bosley

14607 – Online, Professor Amy Bosley

14142 – Telecourse, Professor Suzette Dohany

17351 – Telecourse, Professor Suzette Dohany

11631 – Traditional, Professor Myra Holzer

11635 – Traditional, Professor Myra Holzer

3. Gender

Male Female

4. Age

18 – 24 years of age 25 – 39 years of age 40+ years of age

5. Ethnicity

African African-American Asian or Pacific Islander Asian American
 Caucasian Hispanic Native American Other

6. Number of previous online courses taken, not including this course

0 1 2 3 4+

7. Number of previous telecourses taken, not including this course

0 1 2 3 4+

8. Reasons for taking this class (select yes or no for each item)

- Fulfills general education requirement Yes No
- Content seems interesting Yes No
- Will be useful to me in other courses Yes No
- Will be useful to me in my career Yes No
- Fit into my schedule Yes No
- Recommended by a friend Yes No

9. Are you the first in your family to attend college? Yes No

10. What is your current Grade Point Average (GPA)

Table C2

Reliability of MSLQ Designated Constructs

Scale	Items	Alpha
Intrinsic Goal Orientation	4	.6648
Extrinsic Goal Orientation	4	.6901
Task Value	6	.8727
Control of Learning Belief	4	.4898
Self-Efficacy for Learning and Performance	8	.9046
Test Anxiety	5	.7091
Rehearsal	4	.7426
Elaboration	6	.8403
Organization	4	.7041
Critical Thinking	5	.6772
Metacognitive Self-Regulation	12	.7666
Time Study Environment	8	.1844
Effort Regulation	4	-.3398
Peer Learning	3	.6675
Help Seeking	4	.5486

N = 57

Table C3

Motivation Scales Rotated Component Matrix

	Task Value	Self-Efficacy	Extrinsic Goal Oriented	Control of Learning Belief	Test Anxiety	Test Anxiety
M23	.826					
M27	.791					
M17	.744					
M26	.692					
M22	.691					
M30	.649					
M4	.647					
M10	.623					
M1	.623					
M7	.487					
M29		.761				
M31		.739				
M21		.712				
M5		.700				
M12		.654				
M6		.580				
M3		-.569				
M20		.560				
M15		.553				
M22			.401			
M4			.408			
M21			.429			
M11			.749			
M18			.696			
M7			.545			
M13			.505			
M6				.470		
M20				.481		
M25				.734		
M15				.647		
M16				.613		
M2				.560		
M9				.495		
M13					.416	
M19					.834	
M28					.798	
M24					.690	
M8						.818
M14						.619

Note. M followed by number represent the motivation scale question from the MSLQ. For clarity, less than .4 not shown.

Table C4

Learning Strategies Scales Rotated component Matrix

	Critical Thinking	Help Seeking	Elaboration	Organization	Self-Regulation	Time Study Environment	Rehearsal	Self-Regulation	Help Seeking
LS51	.789								
LS47	.737								
LS62	.649								
LS66	.629								
LS44	.610								
LS76	.589								
LS69	.568								
LS54	.523								
LS71	.510								
LS49	.502								
LS56	.497								
LS34	.413								
LS64	.453								
LS53	.413								
LS78	.419								
LS44		.406							
LS68		.854							
LS75		.780							
LS45		.715							
LS50		.670							
LS36		.645							
LS34		.621							
LS58		.465							
LS62			.472						
LS76			.528						
LS74			.749						
LS73			.731						
LS81			.683						
LS64			.659						
LS42			.485						
LS53			.462						
LS48			.459						
LS59			.405						
LS36				.401					
LS58				.434					
LS32				.719					
LS38				.684					
LS67				.677					
LS63				.677					
LS59				.529					
LS55				.457					
LS61				.509					
LS72				.468					
LS60					-.736				
LS80					-.668				
LS57					-.645				
LS37					-.636				

	Critical Thinking	Help Seeking	Elaboration	Organization	Self-Regulation	Time Study Environment	Rehearsal	Self-Regulation	Help Seeking
LS61					.509				
LS41					.507				
LS70					.500				
LS37						-.460			
LS46						.819			
LS35						.779			
LS65						.755			
LS59							.419		
LS77							-.656		
LS39							.644		
LS78							.507		
LS72							.495		
LS49									
LS49								-.422	
LS41								.453	
LS40								.749	
LS33								.672	
LS58									.407
LS52									.862

Note. LS followed by number represent the learning strategies question from the MSLQ. For clarity, less than .4 not shown.

APPENDIX D: LETTER OF CONSENT

Consent Letter

September 26, 2005

Dear Student:

My name is Edie Gaythwaite and I am a graduate student at the University of Central Florida working under the supervision of faculty member, Dr. Lea Witta, conducting research on self-regulation and its relationship to academic performance and retention in online, telecourse, and traditional Fundamentals of Speech courses. You are being asked to participate in this study to gather information on how academic performance and retention is affected by self-regulation. The purpose of this study is to compare the student's final course grade average, and course completion to their self-regulated behavior. The results of the study may help teachers better understand how self-regulation, academic performance, and retention relate in an online, telecourse, and traditional public speaking course and allow them to design instructional practices accordingly. These results may not directly help you today, but may benefit future students.

All participants must be 18 or older to participate and provide your informed consent. All participants will be asked to visit a web site to complete The Motivated Strategies for Learning Questionnaire, and a demographic information sheet on gender, age, ethnicity, experience with online and telecourses, reasons for taking the Fundamentals of Speech course and grade point average. Participants will be asked to provide their last four digit of their student Valencia ID number (VID), and the course section number. The 20-30 minute procedure will take place once during the semester. With your permission, informative speech grade and final course grade average will also be collected. The information gathered from the instructor will be accessible only to the research team and your identity will be kept confidential to the extent provided by law. The last four digits of the VID number will be used for matching data and awarding extra credit only. We will replace participant VID number with a code number following the closing date of December 18, 2005. Results will only be reported in the form of group data. Data will be saved on a computer disk until the study is completed and the data have been analyzed.

Your participation in this project is voluntary. Five extra credit points will be awarded by the instructor for students enrolled in Fundamentals of Speech, sections 14089, 14607, 14142, 17351, 11631, 11635, for voluntarily participating in the study. Please know your section number prior to entering the questionnaire and the last 4 digits of your Valencia ID. Students may choose an alternative method of earning 5 extra credit points outlined by your instructor. All extra credit assignments are to be completed by the deadline provided by your instructor. Participation or nonparticipation in this study will not affect your placement in any programs. You do not have to answer any question(s) that you do not wish to answer. You have the right to withdraw at any time without consequence. There are no known risks to you. Group results of this study will be available in May 2006 upon request.

If you have any questions or comments about this research, please contact Edie Gaythwaite at ediefla@aol.com or my faculty supervisor, Dr. Lea Witta, College of Education, Orlando, FL 32780; (407) 823-3220. Questions or concerns about research participants' rights may be directed to the UCFIRB office, University of Central Florida Office of Research, Orlando Tech Center , 12443 Research Parkway, Suite 207 , Orlando , FL 32826 . The phone number is (407) 823-2901.

Sincerely,

Edie Gaythwaite

I have read the procedure described above and voluntarily give my consent to participate in Edie Gaythwaite's study of self-regulation and academic performance and retention in an online, telecourse or traditional Fundamentals of Speech course.

You may print a copy of this consent form.

**APPENDIX E: INSTITUTIONAL REVIEW BOARD APPROVAL
LETTER**



Office of Research & Commercialization

September 8, 2005

Edie S. Gaythwaite
133 Alder Avenue
Altamonte Springs, FL 32714

Dear Ms. Gaythwaite:

With reference to your protocol #05-2836 entitled, "**The Relationship Among Students' Self-Regulation, Academic Performance, and Retention Among Community College Students Enrolled in Online, Telecourse, and Traditional Public Speaking Courses,**" I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office. **This study was approved by the Chairman on 9/05/05. The expiration date for this study will be 9/04/06.** Should there be a need to extend this study, a Continuing Review form must be submitted to the IRB Office for review by the Chairman or full IRB at least one month prior to the expiration date. This is the responsibility of the investigator. **Please notify the IRB when you have completed this study.**

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board through use of the Addendum/Modification Request form. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur.

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

A handwritten signature in cursive script that reads 'Barbara Ward'.

Barbara Ward, CIM
UCF IRB Coordinator
(FWA00000351, IRB00001138)

Copy: IRB file
Lea Witta, Ph.D.

BW:jm

12443 Research Parkway • Suite 302 • Orlando, FL 32826-3252 • 407-823-3778 • Fax 407-823-3299

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