Effectiveness of Online Community College Success Courses

by

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ABSTRACT

The purpose of this action research study was to determine the effectiveness of two online college success courses: CPD 150 (College Success, 3 credits) and CPD 115 (Success Strategies, 1 credit), at Rio Salado College, a Maricopa Community College in Arizona. The goal of these courses is to prepare students to be college-ready by examining college readiness and learning skills. The Motivated Strategies for Learning Questionnaire measured students' perceptions of their own college readiness in a pre-test/post-test format. Understanding students' perceptions of their own college readiness is the college's first step in understanding the effectiveness of these courses. Descriptive statistical analysis was used to compare the pre- and post-tests to determine whether the average student scores changed after completion of the college success course. Paired samples *t*-tests (or repeated-measures test) were conducted on 2 scales consisting of 13 subscales of the MSLQ of the Motivated Strategies for Learning Questionnaire.

Data analysis revealed that students reported that they had better study skills after the course than before completing the course. Particularly, learning strategies, test anxiety, self-efficacy, effort regulation (self-management), control of learning beliefs, study skills, and time and study environment stand out as showing substantial improvement for the students.

DEDICATION

I would like to dedicate this dissertation to six family members. Three are no longer here but their spirits guide me and watch over me.

To my father, Dr. Norton Freedman, who was my coach, cheerleader, and role model. The impact you made on Holbrook, Arizona, by caring for and saving so many lives in your short lifetime is something I am so proud of and inspired by.

To my aunt, Sherry Hale; your kindness and warmth will never be forgotten.

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TABLE OF CONTENTS

CHAPTER Page

APPENDIX Page

LIST OF TABLES

LIST OF FIGURES

Figure Page

Chapter 1 Introduction

Higher education has earned a grade of "F" (less than 50 percent) for graduation rates in the United States (U. S.), since only half of the students who attend university or community colleges are obtaining degrees (CCSSE, 2010; Diamond, 2006; Miller, Lincoln, Goldberger, Kazis, & Rothkopf, 2009; Oblinger, 2010). This is not acceptable if the U.S. wants to remain competitive in today's global market. America has fallen behind other developed countries in postsecondary attainment, and large gaps in college completion rates remain for low-income and minority students (Auguste, Cota, Jayaram, & Laboissiere, 2010; Jenkins & Bailey, 2009). Twenty years ago, the U.S. ranked first in the world for postsecondary degree attainment rates (Marchese, 2009). The U.S. is now ranked 10th (CCSSE, 2010; Marchese, 2009).

> In Arizona alone, out of 100 ninth graders only 68 will graduate and only 30 will enter college immediately after high school. Of those 30, only 19 will return for their sophomore year. Of those 19 returners, only 4 will have an associate's degree conferred within three years and 5 will have a baccalaureate degree within 6 years. (Complete College America, 2010)

Arizona, along with a majority of other states, needs to greatly improve high school, two-year, and four-year graduation rates in order to help America remain a leader in economic power.

Community colleges are the largest and fastest-growing sector of U.S. higher education. Nearly half of the country's undergraduates are pursuing a degree/certification/transfer pathway via the nation's 1,200 community colleges

(AACC, 2010; Miller et al., 2009). Community colleges provide a crucial gateway to postsecondary education, but fewer than half of community college students complete their program of study; that number is even lower for disadvantaged students such as low-income students, students of color, and first-generation students(Miller et al., 2009; Oblinger, 2010). Since community colleges offer convenient locations, open access, and low cost, they tend to enroll larger numbers of students who are more academically, economically, and socially disadvantaged than universities do (Cohen & Brawer, 2008; O'Gara, Karp, & Hughes, 2009). Consequently, community college students are more likely than university students to have delayed entry into higher education, attend part-time, work full-time, be financially independent with dependents, and be single parents. By embracing an unprecedented number of enrolled students and an extraordinary diversity of student abilities and educational experiences, community colleges are challenged to educate and graduate a higher proportion of underprepared students (Roueche & Roueche, 1993).

Jobs in the future will require more education, but the population will not be adequately prepared if graduation rates remain the same. Experts predict that in the coming years, jobs requiring at least an associate's degree are projected to grow twice as fast as those requiring no college experience (Brandon, 2009b; Mingle, Chaloux, & Birks, 2005). In the future, a college-educated person with an advanced degree will be the staple of a high-technology, global economy, and to compete worldwide, major U.S. corporations will seek well-educated, highly skilled individuals able to work in a multicultural world (Auguste et al., 2010;

Bowen, Kurzweil, & Tobbin, 2006; Burlison, Murphy, & Dwyer, 2009; Oblinger, 2010; Rodgers, 2005; Valverde, 2008). The United States must maintain its competitive footing and close gaps in attainment among traditionally underrepresented groups (e.g., low-income students, students of color, and first-generation college students, Anderson, 2011; Gates, 2010; Jenkins & Bailey, 2009; Miller et al., 2009; Oblinger, 2010). Further, The National Center for Public Policy and Higher Education (2008) indicates that for every 100 students enrolled in a higher education institution only 18 graduate with a certificate or degree. The U.S. cannot afford to maintain the status quo. To that end, to grow an educated, competitive workforce, President Obama desires the U.S. to have the highest proportion of college graduates in the world once again by the year 2020, calling for five million certificates and degrees to be earned by community college students (Brandon, 2009b). This goal's focus is to dramatically increase the number of young people who graduate from high school and who go on to complete a postsecondary degree or certificate. The Lumina Foundation, a long-time leader in this endeavor, also seeks to increase the percentage of Americans with higher education degrees from 39 percent to 60 percent by 2025 (Pennington & Shaw, 2010). As of 2007, only 59 percent of full-time students entering a two year public institution intending to earn a degree are retained from freshman to sophomore year. Twenty-eight percent of students who enter an institution with the intent of earning an associate's degree persist to graduation in at least three years (Lee & Rawls, 2010). In Arizona, 44 percent of full time, first-time, degree seeking students graduated from a community college in 2007 (National Center

for Educational Statistics, 2011). Simply stated, community colleges can no longer continue to let students leave their doors without a certificate or degree in hand.

Community colleges across the U.S. are the one key to keeping the country's competitive edge because they help produce an educated population. As previously stated, community colleges were designed to serve and educate the community; their convenient locations, open access, and low costs provide the most accessible route for Americans to obtain a certificate or degree (Cohen & Brawer, 2008; O'Gara et al., 2009; Oblinger, 2010). The benefits of an educated population are many. A college educated population raises incomes and lowers poverty, creates opportunities, solves problems, reduces barriers, and elevates civic engagement (Kirwan, 2007; Rodgers, 2005). However, with pandemic state budget cuts to community colleges, funding for higher education is decreasing. Interestingly, there is a move to fund community colleges not by student enrollment, as is currently done, but by successful student course and program completion (CCSSE, 2010; Complete College America, 2010). In other words, community colleges would need to switch focus from recruitment and enrollment, to recruitment, enrollment, retention (course completion), and persistence (progress towards certificate or degree) in order to receive state funding. Thus, there is an incentive for community college administrators to be concerned about student course and program completion and not just about increasing access to a community college education.

Presently, the most significant barrier to college success and corresponding low graduation rates in higher education is the fact that students are coming to universities and community colleges lacking college readiness skills (Bowen et al., 2006; Conley, 2010; Pascarella & Terenzini, 2005; Upcraft, Gardner, & Barefoot, 2005). Essential college readiness skills include study skills (note taking, reading a text book, identifying main points, preparing for exams), goal setting, test taking strategies, and time management (Jenkins & Bailey, 2009; Upcraft et al., 2005).

The issue of academic preparation can be even more problematic for students in an online setting (Lorenzo, 2011). Palloff and Pratt (2003) indicate that, "Students who are taking online courses for the first time often have no idea about the demands of online learning"(p. 11). An online student must possess specific abilities and skills in order to be successful. These abilities and skills include self-motivation, time-management, and technology proficiency (Bell, 2006; Kelso, 2009; Lorenzo, 2011; McGhee, 2010). Online students not only need to have basic technology skills (e.g., operating a computer, using standard computer programs, navigating the Internet), but they also need access to a computer and the Internet. Preferably, students should own their own computers, with reliable Internet service for convenient access to their classes, without technology or time limitations (Pallof & Pratt, 2003; McGhee, 2010). While online community college courses may appear attractive to students because of the low cost, increased accessibility, and flexibility, online community college

courses that require students to have the aforementioned skills and tools can present an added barrier to college success.

Preparing students to be college-ready is the responsibility of the entire educational system, from preschool and kindergarten, to elementary and middle school, to high school and community college or university, to graduate work. Thus, this system is often referred to as the P-20 (preschool and beyond) system. Currently, several initiatives and innovations are in place to prepare students to become college-ready. Some of those growing initiatives include P-20 system curricular alignments, dual enrollment that offers college credits to students at the high school level, early college outreach in elementary school, charter schools with non-traditional ways of educating, online high schools, and accelerated high schools (AACC, 2010; Brewer, 2011; Complete College America, 2010; Conley, 2010; Lee & Rawls, 2010). At the individual community college level, additional college-readiness programs include, developmental education, financial aid workshops, learning communities, mandatory assessment and placement, mandatory advisement, mandatory orientation, tutoring, peer or faculty mentoring, early warning systems, and college success courses (Cohen & Brawer, 2008; CCSSE, 2010; Emmerson, 2009; Hadden, 2000; Hanover Research Council, 2011; McCabe, 1998; Roueche & Roueche, 1993). Adopting a student success initiative on an institutional level by clearly implementing these programs can have graduation rate gains of five, ten, or even twenty percentage points (CCSSE, 2010; Jenkins & Bailey, 2009; Marchese, 2009). Furthermore, programs

that are student-centered and have clear expectations help increase students' chances for academic success.

A popular approach to student success in higher education is teaching students the skills they need to become high-achieving college students via student success seminar courses (also referred to as first-year success courses, learning to learn courses, college success courses, college readiness courses, College 101, and study skills courses). These student success courses teach students fundamental strategies for achievement, such as how to write notes, take tests, and manage their time; they also explore particular learning styles and emphasize goal setting and planning for college and careers (Ellis, 2003; O'Gara et al., 2009; Pascarella & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006 ; Zeidenberg, Jenkins, & Calcagno, 2007). Often students are encouraged to take such classes in their first semester so they can gain knowledge that is vital to thriving in all of their other courses. Research has shown that first-year success courses help students prepare to become productive, high-achieving college students (El Khawas, 1995; Ellis, 2003; Estevez, 2005; Hanover Research Council, 2011; J. Jarret personal communication, September 8, 2011; Lingo, 2009; O'Gara et al., 2009; Pascarella, & Terenzini, 2005; Upcraft et al., 2005; Zeidenberg et al., 2007). In fact, research on college success courses is more prolific than most other post-secondary courses (Barefoot, 1993; Hunter & Linder, 2003). Even though most of this research primarily concerns the university level, community colleges across the country are increasingly adopting

the use of first-year success courses to address students' lack of college readiness skills (Kelso, 2009; Tobolowsky, Mamrick, & Cox, 2005; Tighe 2006).

Purpose Statement

Rio Salado College, a primarily online community college in the Maricopa County Community College District located in the Phoenix, Arizona, metropolitan area, has developed two such online college success courses to meet the needs of underprepared students. These courses, CPD 150 (College Success, 3 credits) and CPD 115 (Success Strategies, 1 credit), purport to teach students the college skills they need to be successful online college students.

At Rio Salado, the college success courses are offered through the Counseling Department. As the Counseling Faculty Chair for Rio Salado College, I, the researcher, oversee the counseling curriculum, including college success courses. As a practitioner-researcher, the researcher is considered a pragmatist, meaning the researcher has a worldview that recognizes and acknowledges consequences of actions and situations (Creswell, 2009). Most pragmatists will agree that research can occur in a multitude of contexts (Creswell, 2009); this action research study will specifically involve social, historical, political, and educational contexts. The researcher believes that ill-prepared college students are a nationwide problem that our society has perpetuated. However, the researcher also believes that systematic educational programs (P- 20) can help students prepare for college and increase higher education graduation rates. Preparing all students to be college ready is the responsibility of the nation's entire educational system. The U.S. must do more and quickly. A systematic solution is needed.

Online college success courses are merely a piece of the success puzzle when it comes to increasing graduation rates at the community college and baccalaureate level. Overall, constructing successful intervention programs for ill-prepared students-- whether they attend in person or online--is crucial (Vosberg, 2006). This research was focused on the researcher's community of practice using action research to contribute to helping underprepared students who attend Rio Salado College.

Because the study's purpose was to determine the effectiveness of an intervention program, a quantitative action research study was best suited for this community of practice. Quantitative research focuses on cause-effect relationships and/or the strengths of those relationships (Mills, 2003). Quantitative research also uses numbers to represent the cause-effect relationship. In the tradition of action research studies, this particular study will measure students' perceptions of their own college readiness by examining motivation and learning skills before and after completion of Rio Salado's college success courses. Understanding students' perceptions of their own college-readiness is the first step in understanding the effectiveness of these courses. More specifically, the counseling department at Rio Salado believes it is important to understand students' perceptions to become more student-centered, and thus values students' perceptions of what they are learning in their success courses. Student perception is a valid predictor of success because it is directly correlated to perceived self-efficacy. Perceived self-efficacy is defined as people's beliefs about capabilities of performance levels that exercise influence over events that affect their lives

(Bandura, 1994). Self-efficacy beliefs determine how people feel, think, motivate themselves, and behave (Bandura, 1994). Students' belief in their capabilities to master academic activities affects their aspirations, their level of interest in academic activities, and their academic accomplishments (Bandura, 1994).

To measure student perceptions of their skills, The Motivated Strategies for Learning Questionnaire (MSLQ) was administered within the course. The MSLQ is a self-report instrument designed to assess college students' motivational orientations and their application of different learning strategies for a college course (Pintrich, Smith, Garcia, & McKeachie, 1991). The MSLQ is divided into two major sections: motivation and learning strategies. Both sections are useful in measuring the effectiveness of college success courses because they measure not only motivations and learning strategies, but also time management skills, test anxiety, and self-efficacy. Both sections also align with course learning outcomes (Appendix A).

Approximately 150 students per semester enroll for Rio Salado's college success courses. Rio Salado College does not require new students to take a college success course, nor does Rio Salado make this course mandatory for certain student populations, even though all other sister colleges in Maricopa County Community College District (referred to later as the District) do. Typically students may voluntarily sign up for these courses because they are new to college, undecided on a major, wish to increase study skills and time management, or have repeatedly failed a course. As standard practice, personnel from Rio Salado College's call center contact students who have repeated failures

and encourage them to enroll in a success course. However, there are circumstances in which a student is required to complete a college success course. If, for example, a student has three failed attempts in a science or math course at Rio Salado, those departments require the student to complete a college success course before enrolling in the course a fourth time. The counseling, math, and biology departments call this an intervention. Unfortunately, students who are part of such interventions have usually been enrolled in college for an average of four semesters. The counseling department at Rio Salado College suspects that a significant number of students are not necessarily taking a success course their first term. As an institution/department, data collection to address this question is beginning but has not been completed prior to the completion of this study. Clearly, understanding the impact of these success programs, as well as when and how to implement them (i.e., voluntary enrollment versus mandatory enrollment), is important. If students perceive that these courses effectively teach success strategies, degree-seeking students at Rio Salado College will start online classes with the requisite study skills, time management techniques, and motivational strategies. Moreover, if the college success course is effective with the small population who are enrolling *late* in a first year seminar course, the College and District can better determine the viability of mandating such a program in the first semester, as suggested by the research (CCSSE, 2010; Emmerson, 2009; Hanover Research Council, 2011; J. Jarret personal communication, September 8, 2011; Kelso, 2009; O'Gara et al., 2009; Vosberg, 2006).

In summation, it is first important to know students' perceptions regarding their own study skills, time management techniques, and motivational strategies to better understand the effectiveness of teaching success strategies presented in these courses, so that modifications can be made. After that, the counseling department at Rio Salado College can then develop improvements in areas of the course that are not perceived as effective.

Research Question

There is a body of literature that generally indicates an association between participation in college success courses and a range of positive outcomes, although the literature is mostly geared toward university students (Estevez, 2005; Lingo, 2009; O'Gara et al., 2009; Pascarella & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006). As a result, a dearth of research regarding community college success courses abounds (Gray 2001; Kelso, 2009; Tighe, 2006). However, this research study will provide some much needed information by attempting to answer the following:

What are students' perceptions of their acquisition of college success strategies in Rio Salado's online college success courses?

To address the research question, the MSLQ was selected based on its alignment with course competencies. The MSLQ has a total of 15 areas of measurement (Pintrich et al., 1991), and measures many of the course competencies for CPD 115 and CPD 150 (see Appendix A). Students completed the questionnaire at the beginning of both courses; they also completed it at the end of their enrollment in CPD 115 (1 credit course) and at the end of the success

strategies learning units in CPD 150 (3 credit course) to determine whether their participation in the course contributed to any increase in their individual perceptions of their perceived college readiness. This information (students' perceptions) will be used to better understand the effectiveness of CPD 115 and CPD 150 in teaching success skills (see Appendix B).

Chapter 2 Review of the Literature

This literature review will first provide the history, purpose, and current status of community colleges. Then, it will cover distance education at the community college, followed by a focus on the first-year seminar/college success courses, specifically addressing student engagement, first-year initiatives, research on the first-year seminar/college success courses, and online success courses. Next, the literature will provide a description of Maricopa County Community College District, the history of Rio Salado College, and an overview of Rio Salado College's current state. A summary of the completion challenges the college faces will follow, as well as information about Rio Salado College's online college success courses. Finally, this literature review will discuss the selected survey instrument for the study, The Motivated Strategies for Learning Questionnaire (MSLQ).

Community Colleges

History of community colleges. The establishment of community colleges began in 1901, when Joliet Junior College in Illinois became the first public two-year college. The college was added to a local high school as the equivalent of Grades 13 and 14 to prepare qualifying students for the first two years of college (AACC, 2009; Cohen & Brawer, 2008; Vaughan, 2006). Three years later, the University of Wisconsin declared the whole state was its campus and began to assist the general public through extension services (e.g., junior colleges) with assistance from the state government (Vaughan, 2006). In 1910, the first public junior college opened its doors in Fresno, California, prompted by

California legislation that authorized high schools to offer post-graduate courses, provided state and county support for junior college students, and provided for independent junior college districts that had their own boards, budgets, and procedures (AACC, 2010; Vaughan, 2006). By 1917, the North Central Association had established standards for accreditation for public and private junior colleges (Vaughan, 2006). Founded in 1920, the American Association of Community Colleges (AACC, originally named the American Association of Junior Colleges) has since been the leading proponent and national "voice for community colleges" (AACC, 2009).

Today, community colleges have a rich history of providing education at a reasonable cost due to significant legislative milestones. For example, the GI Bill was created in 1944 specifically to assist World War II veterans with college expenses. That marked the federal government's first attempt to break down economic and social barriers, allowing millions of Americans to attend college (AACC, 2009; Vaughan, 2006). Indeed, more than 2.2 million veterans, including more than 60,000 women and approximately 70,000 Blacks, attended college under the GI Bill (AACC, 2009). Additionally, as the baby boomer generation increased in age so did the expansion of community colleges. By the 1960s, over 500 community colleges had been founded to educate the baby boomer generation. This community college growth was also influenced by the Higher Education Facilities Act of 1963 and the Higher Education Act of 1965, in which the federal government expanded its aid to community colleges and their students (Vaughan, 2006). In 1972, the government created Pell Grants (money given out

by the government based on financial need that does not have to be repaid) that are now available to over two million community college students (Mensel, 2009).

Finally, community colleges have a noteworthy history of progress and development. By the 1970s, the term *community college* replaced the name *junior colleges* (Cohen & Brawer, 2008). Originally the name *junior college* was defined as "an institution offering two years of instruction of strictly collegiate grade" (Bogue, 1950, p.xvii). Strict collegiate grade meant that these courses were as identical in scope and thoroughness as the standard four-year college classes were (Bogue, 1950). Later in the 1950s and 1960s the name *junior college* was applied more often to lower division branches of private universities and colleges supported by churches, while the term *community college* came to be used for the comprehensive publically supported institutions (Cohen & Brawer, 2008). Community colleges are a particularly significant part of America's university system because they are uniquely able to address their communities (Brandon, 2009a) through academic and comprehensive curricular functions that include academic transfer preparation, vocational/technical education, continuing education, developmental education, and community services (Cohen & Brawer, 2008). In the 1980s, The Commission on the Future Community College Report challenged community colleges to assume leadership roles in creating a renewed climate of community in their service regions (AACC, 2009; Vaughan, 2006). *Community College Press* and *Community College Times* were started as part of the response to that challenge in the 1980s (AACC, 2009; Vaughan, 2006). The

creation of *Community College Press* and *Community College Times* helped to influence federal policy and bring recognition and advocacy to community colleges (AACC, 2009). Later, the Scientific and Advanced Technology Act also responded to the challenge by spawning a partnership with both community colleges across the nation and the National Science Foundation in 1992 (Vaughan, 2006). In 1998, the government created the Hope Scholarship Tax Credit, which could be used toward the first two years of college. That same year, two acts, the Workforce Investment Act and the Carl D. Perkins Vocational and Technical Educational Act, reinforced the importance of the roles of community colleges in vocational training (AACC, 2009; Vaughan, 2006). As the federal government continued to assist college seeking students, community colleges grew to accommodate the needs of students eligible for federal aid and the needs of their surrounding communities. Currently, there are approximately 1,200 community colleges nationwide, all providing education to their local communities (AACC, 2009). Since 1901, at least 100 million people have attended community colleges (AACC, 2009).

Purpose of community colleges. In *The American Community College*, Cohen and Brawer (2008) define the community college as "any institution regionally accredited toward the associate's in arts or the associate's in science as its highest degree" (p. 5). To that end, community colleges have often been called the Ellis Island to higher education, meaning the gateway to a better life (Cohen & Brawer, 2008). Two-year colleges remain the most financially, geographically, and academically accessible route to a higher education for minorities, women,

and rural students (Gumport, 2007). They serve many non-traditional or part-time students who may otherwise have a hard time receiving a higher education (Brandon, 2009a; CCSSE, 2010; Cohen & Brawer, 2008; Oblinger, 2010). They are also flexible and affordable, which is especially important in tough economic times (Brandon, 2009a; CCSSE, 2010; Cohen & Brawer, 2008; Oblinger, 2010). Community colleges also have open admission policies, which allow everyone who applies to take courses, and they often teach English to immigrants looking to join the workforce (Brandon, 2009a; Cohen & Brawer, 2008).

One special function of community colleges is to prepare two year degree seeking students to become four year degree seeking students. In other words, community colleges provide a bridge between high schools and universities by helping students attain the academic skills or grade point average (GPA) they did not earn in high school so that they can eventually be accepted for admission to the university. The 2/4 community college–baccalaureate transfer function is one of the most important state policy issues in higher education because its success (or failure) is central to many dimensions of state higher education performance, including access, equity, affordability, cost effectiveness, degree productivity, and quality (Wellman, 2002). When it comes to increasing graduation rates, the community college transfer function is vital.

Another purpose of community colleges is to teach specialized skills in certificate and degree programs that lead to technical careers. Some examples of technical careers include construction trades, medical fields (nursing, respiratory technology, medical radiography), and industrial technology (air-conditioning and

heating, manufacturing, automotive repair). Community colleges also offer continuing education courses for lifelong learners or those seeking credits to maintain certifications in fields such as teaching or counseling. Community programs such as basic education for adults, GED classes (high school equivalency), English as a second language courses, and developmental education courses that prepare students to take college level English, reading, and math courses are all unique community services provided by community colleges.

Community colleges also provide community services through unique avenues. They often host art exhibitions, cultural events, and public speakers, many of which are open to the local community. Any public function of college facilities falls under community service (Cohen & Brawer, 2008). Community service can expand into the classroom by offering noncredit classes such as child care, cardio-pulmonary resuscitation (CPR), and even family budgeting (Cohen & Brawer, 2008). Providing programs for prison inmates would be another example of the unique community service that community colleges provide.

Current status of community colleges. Over time, there has been a general shift in attitudes about college attendance and achievement. For example, Marchese (2009) indicates that for many years high school completion was widely seen as a necessary precondition to jobs and further education, whereas higher education was not. Marchese (2009) also states that public mindset was that if a student dropped out of high school, it was the school's fault, but if a student dropped out of college, it was his fault. Times have changed. Community colleges are now more accountable for students who drop out or never finish. In

1973, only about one-quarter of the American workforce needed a postsecondary degree or credential in order to get or hold on to a job (Gates, 2010). In 2007, that figure hit 57 percent, and new research predicts that by 2018, 63 percent of jobs in America will require an education beyond high school (Gates, 2010). Unable to find enough skilled workers, U.S. businesses are outsourcing millions of high-skill, high-wage jobs to Germany, Japan, Singapore, Korea, and Canada (Gates, 2010; Valverde, 2008). Community colleges are needed now more than ever to keep America competitive and provide the benefits of a well-educated populace (Brandon, 2009b). After all, society reaps the benefits when its students are well educated.

A second example reveals that after decades spent concentrating on open access, many community colleges across the U.S. acknowledge that the vast majority of students are not meeting their educational goals (Miller et al., 2009). As previously stated, in the U.S. more than half of all college students do not complete a degree or credential (Anderson, 2010, Gates, 2011; Oblinger, 2010; Miller et al., 2009; CCSSE, 2010). Although community colleges provide a crucial gateway to postsecondary education for many low-income students, students of color, and first-generation college students, fewer than half of community college students meet their educational goals, and that number is even lower for disadvantaged students (Miller et al., 2009; Oblinger, 2010). In Arizona, graduation rates for community college students average close to 20 percent in a three year time span (Complete College America, 2010). In the Maricopa County Community College District, graduation rates range from 10 to 45 percent in a

three year time span for all ten colleges (Complete College America, 2010; National Center for Educational Statistics, 2011).

According to Pascarella and Terenzini (2005), when students attend a two-year institution, their chances of continuing to four-year institutions increases (Wellman, 2002). Nationally, about 70 percent of students, after taking at least a semester's worth of credits, who transfer from two- to four-year colleges, graduate with a baccalaureate degree (Wellman, 2002). Not surprisingly, students who are most successful in 2/4 transfers have attributes similar to those who are successful in four-year institutions; they have rigorous academic preparation in high school, they enroll full-time, and they do not take time off en route to the degree (Wellman, 2002). In many years of analysis by Maricopa Community Colleges and Arizona state universities, a positive correlation has been found between number of credits transferred and performance outcomes at the Arizona state universities (Maricopa County Community College District Center for Curriculum and Transfer Articulation, 2009). Forty-six percent of Maricopa Community College system students indicate upon admission that they intend to transfer (Maricopa County Community College District Center for Curriculum and Transfer Articulation, 2009). However, data shows that only twenty-four percent of new transfer students at state universities had completed an associate's degree (Maricopa County Community College District Center for Curriculum and Transfer Articulation, 2009). Correspondingly, seventy-one percent of Maricopa students who transfer to an in-state public institution enroll at Arizona State University (ASU), ten percent enroll at Northern Arizona University, and nine

percent enroll at University of Arizona (Maricopa County Community College District Center for Curriculum and Transfer Articulation, 2009). Another ten percent of students transfer to private institutions or out-of-state institutions (Maricopa County Community College District Center for Curriculum and Transfer Articulation, 2009). In fall 2008, 2,817 Maricopa Community College system students were new to ASU **(**M. Hesse**,** personal communication, Jan 31, 2011). Of the 2,817 students, only 481 had an associate's degree, 190 had a transfer certificate (Arizona General Education Curriculum or AGEC), and 2,146 had neither an associate's degree nor an AGEC **(**M. Hesse**,** personal communication, Jan 31, 2011).

There are several strategies community colleges are using to increase graduation and transfer rates. First, community colleges are broadening their focus to retention and degree completion by concurring on a national vision. The American Association of Community Colleges, Association of Community College Trustees, League for Innovation, Center for Community College Student Engagement, National Institute for Staff and Organizational Development, and Phi Theta Kappa are organizations representing the nation's 1,200 community colleges, their governing boards, their faculty, and their 11.8 million students. These organizations have pledged in a statement of commitment to increase student completion rates by 50 percent over the next decade (AACC, 2010). Locally, the State of Arizona has a P-20 Coordinating Council that is charged with devising and articulating ways to achieve a more streamlined system of education, while improving academic achievement (Brewer, 2011). Individually,

community colleges leaders are re-examining college operations and focusing on student success initiatives. Community colleges receive public and private grants through a competitive application process. Local efforts at the district level include mandatory assessment and placement, mandatory orientation, mandatory advisement, and a mandatory success course for students placing in one or more developmental education courses. Official efforts are forming, but dramatic results need to be obtained at an accelerated rate in order to adequately educate our population.

Distance Education in the Community College

Initially, distance education provided access to those who may never have had the chance to attend a course in person, such as those students living or working in remote locations of a state. However, today's online education, a form of distance education, provides a choice in how one decides to attend class, even if there are no physical limitations to attending.

The distinguishing attribute of distance education is that students and teachers are separated by distance and sometimes by time (Moore & Kearsley, 2005). The use of electronic and printed technologies as the form of communication is what distinguishes this form of education from other forms of education (Moore & Kearsley, 2005). Surprisingly, the roots of distance education date back to the 19th century, but the rapid development of and advances in technology in the late 20th and early 21st centuries have prompted an unprecedented growth in this field (Addis, 2009). It was at the end of the 19th century that a number of Canadian, American, and European universities first

offered distance education courses, reflecting the growing public thirst for education (Sumner, 2000). The public sought knowledge, and distance education made it possible when geographical limitations existed (rural areas and remote locations). Eventually, technological advancements such as the telephone, radio, audio, and video cassettes prompted a prolific period of growth in distance education (Addis, 2009). Distance education contributed to the accessibility of community college attendance for students who could not physically attend for a variety of reasons; perhaps they had young children at home, a physical disability, a demanding work schedule, or a lack of reliable transportation. Just as massive technological development spurred distance education, the two World Wars also promoted the growth of distance education due to an increase in federal funding for education for veterans (Sumner, 2000).

Similarly, many other events helped this form of education to grow. For example, the City Colleges of Chicago organized TV College consisting of recorded classroom environments shown on a local television station in the 1950s. Several other community colleges also received licenses for the cultural enrichment and entertainment of the public, as well as for-credit courses (Cohen & Brawer, 2008). As community college offerings expanded, so did distance education. According to Cohen and Brawer (2008), the *noncampus* college became particularly popular in the 1970s because interest in television and increased enrollments led many more colleges to develop their own materials. In the 1970s, e-mail made possible a more generalized educational adoption of computer networking. It was first used for academic information exchange and

then later used to supplement university-level courses (Harasim, 2000). The 1980s and 1990s saw enormous innovation and expansion in online education and networking at all levels of education (Harasim, 2000). The next phase in the evolution of distance education came with the development of the Internet in 1989 and the World Wide Web in 1992 (Addis, 2009; Harasim, 2000).

With the advent of the World Wide Web in the early 1990s, online higher education courses developed across disciplines. As a result, student enrollment and development of these courses at universities and community colleges continue to grow today. In the year 2000, at least one-third of American colleges and universities were offering online courses, but not necessarily at community colleges (Harasim, 2000; Stumpf, McCrimon, & Davis, 2005). Two years later community colleges improved in this area; in fact, two-year associate institutions had the highest growth rates and accounted for over one-half of all online enrollments from 2002 to 2007 (Allen & Seaman, 2007).

Over 6.1 million students took at least one online course during the Fall 2010 term in the U.S.; this is an increase of 560,000 over the number reported the previous year (Allen & Seaman, 2011). According to the Sloan Consortium Report (A Consortium of Institutions and Organizations Committed to Quality Online Education), *Going the Distance: Online Education in the United States, 2011,* the ten percent growth rate for online higher education enrollments far exceeds the less than one percent growth of the overall higher education student population (Allen & Seaman, 2011). It is clear that distance education in the community college is a growing trend and here to stay.

First-Year Seminar/College Success Course

Student engagement. Student engagement, retention, and development theorists (Astin, 1977; Pascarella & Terenzini, 2005; Tinto, 1993) suggest positive correlations between student learning and engagement in the learning process (Hunter & Linder, 2005). Engagement theorists posit that at the university level, engagement also occurs outside the classroom through extracurricular activities (Astin, 1977; Pascarella & Terenzini, 2005; Tinto, 1993). Student engagement theorist, Vincent Tinto, further asserted that engagement at the university level looks different than engagement at the community college level (CCSSE, 2008). Tinto indicated that engagement needs to occur heavily in the classroom because commuter students, students who work, and students who have other family obligations such as children are less likely to participate in extracurricular activities (CCCSE, 2008). Tinto (CCCSE, 2008) states the following in the forward of the *Community College Survey of Student Engagement*:

> As a result, the classroom may be the only place students interact with one another and with faculty, the only place where they can be effectively engaged in learning. If high expectations and high support are not experienced in the classroom, they are not likely experienced elsewhere. (p.1)

Both and in-person classes at community colleges play a vital role in academically engaging their student population; if students are not engaged in the classroom, then it is unlikely that they will be successful.

First-year initiatives. As stated before, first-year initiatives have been created in higher education to increase retention from the freshman to the sophomore level. Many of these first-year initiatives prepare freshmen to be college-ready. Some first-year initiatives outside the curriculum include orientation programs, academic advisement, course assessment and placement, student support services, on-campus living experiences, and extracurricular opportunities (Cohen & Brawer, 2008; Pascarella & Terenzini, 2005; Tinto, 1993; Upcraft et al., 2005). First year initiatives incorporated in the freshmen curriculum include developmental education supplemental instruction, service learning, and learning communities (CCSSE, 2010; Cohen & Brawer, 2008; Pascarella & Terenzini, 2005; Tinto, 1993; Upcraft et al., 2005). The goal of developmental education is to increase English, math, and reading skills to attain college-readiness (CCSSE, 2010; Cohen & Brawer, 2008; Pascarella & Terenzini, 2005; Upcraft et al., 2005). Supplemental instruction is any structured program designed to increase mastery of course content in courses with a 30 percent or higher failure rate (Upcraft et al, 2005). Supplemental instruction is led by a student who has successfully taken a course and been trained to lead regular out-of-class sessions (Pascarella & Terenzini, 2005; Upcraft et al., 2005). Service learning incorporates hands-on community service projects into the curriculum that benefits the students and those they serve (Cohen & Brawer, 2008). Learning communities are clusters of classes organized around a curricular theme; they are usually cohort-based, meaning the same group of students takes the same group of courses with possible shared

assignments for two or more courses (CCSSE, 2010; Cohen & Brawer, 2008; Pascarella & Terenzini, 2005).

Among the most successful curriculum vehicles for helping students are college success courses (also referred to as the first-year student seminar; El Khawas, 1995; Upcraft et al., 2005). First-year seminars have existed for more than a century, but their dramatic growth in the 1970s brought wide attention to their potential as a tool for easing the transition to college, improving student retention, enhancing academic performance, and having a positive impact on student success measures (Hunter, Skipper & Linder, 2003; Mamrick, 2005). The first-year seminar was redesigned and implemented as University 101 by John Gardner at the University of South Carolina in 1972 (Mamrick, 2005; Vosberg, 2006). Community colleges offer student success courses that teach students how to write notes, take tests, and manage their time. They explore particular learning styles and work on goal setting plans for college and their careers (Ellis, 2003; O'Gara et al., 2009; Pascarella, & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006; Zeidenberg et al., 2007). Such courses are designed to help students navigate a college system and to increase self-awareness and personal effectiveness (Ellis, 2003; O'Gara et al., 2009; Pascarella, & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006; Zeidenberg et al., 2007). Overall, college success courses foster college readiness skills and empower students with strategies for success in college. Furthermore, college success courses are highly adaptable (Hunter & Linder, 2005). This is most evident when one considers they can fit into one of five categories: extended orientation seminars, academic seminars with generally

uniform content across sections, academic seminars on various topics, professional or discipline-linked seminars, or basic study skills seminars (Hunter & Linder, 2005). Although these seminars generally combine elements or overlap in several categories (Hunter & Linder, 2005), they often vary considerably within and across institutions (Pascarella & Terenzini, 2005). Thus, seminars come in various forms, but all have the goal of improving academic performance, persistence, and degree completion (Pascarella & Terenzini, 2005).

Research on success courses at community colleges. It is interesting to note that first-year seminars have been the subject of a vast number of research studies. That research has uncovered multiple benefits for students who have completed them (Downing, n.d.; Hanover Research Council, 2010; Jenkins & Bailey, 2009; McCabe, 1998; O'Gara et al., 2009; Zeidenberg et al., 2007). The benefits include higher graduation rates and a reduction in dropouts; when classes are mandatory for all freshmen, improved retention and increased persistence rates range from 8 to 30 percent. The benefits for students are higher GPAs than those who did not take the course (Downing, n.d.; Hanover Research Council, 2010; Jenkins & Bailey, 2009; McCabe, 1998; O'Gara et al., 2009; Zeidenberg et al., 2007). Additionally, students gain information about the college, develop skills and techniques that could help them in their academic endeavors, and create important relationships (O'Gara et al., 2009). Research studies conducted across the country at multiple types and sizes of community colleges all indicate positive results for community college students.

First-year seminars are one of the most widely assessed courses in higher education (Barefoot, 1993; Hunter & Linder, 2003). Pascarella and Terenzini's (2005) review of over 2,600 research studies revealed that first-year seminars appear to benefit the academic performance, persistence, and degree completion of all categories of students regardless of factors such as gender, ethnicity, and age. Pascarella and Terenzini (2005) also noted that community colleges are still significantly underrepresented in the total body of evidence regarding the impact of first-year seminars (Cohen & Brawer, 2008; Estevez 2005; Lingo, 2009; O'Gara et al., 2009; Upcraft et al., 2005; Vosberg, 2006). In other words, there is a lack of community college research regarding the success courses compared to the amount of research done with the First-Year Experience course at the university level (Cohen & Brawer, 2008; Estevez 2005; Lingo, 2009; O'Gara, et al., 2009; Pascarella & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006). There is even a greater lack of research pertaining to online community college success courses (Gray 2001; Tighe, 2006; Kelso, 2009).

There may be several reasons for the lack of research on college success courses at the community college level. First, community colleges are concerned with teaching and learning, while universities are concerned with teaching, learning, and research (Cohen & Brawer, 2008). Simply stated, community college faculty are not required to conduct research. Secondly, community colleges do not offer this course in a consistent format (Cohen & Brawer, 2008). For example, it has many different titles such as College Success, First-Year Experience, Academic Skills, College Readiness, College 101, and Study Skills

(Pascarella & Terenzini, 2005; Upcraft et al., 2005). The success course also has many forms; some community colleges call it a seminar or a course and offer transferable credit. Conversely, some community colleges offer it as a seminar, a study skills workshop, or advanced orientation and offer no credit (Hunter & Linder, 2005). On the other hand, some courses offer no credit or up to three or four credits. The curriculum also varies from an emphasis on career exploration, to goal setting, to personal development, to study skills development or improvement. This lack of uniformity makes outcomes harder to compare and measure (Hunter & Linder, 2005). Furthermore, the lack of consistency in who teaches the course also limits research. For example, some colleges train faculty in different disciplines to teach the course, others use student affairs professionals, and the rest may use counselors or counseling faculty (Hunter & Linder, 2005). Finally, this success course typically does not stand alone in the majority of the research studies; instead, it is one component of a larger study. Many times it is used as part of an orientation program, developmental education program, or academic intervention program.

Online college success courses. In 2003, the National Survey on First Year Seminars (Tobolowsky et al., 2005) was formed to investigate online elements in first year seminar courses for the first time in community college history. Twenty-two percent of community colleges who participated in the survey offered all or part of their seminars online. In other words, at that time, only 28 two-year institutions had elements of their first-year seminars online, with

20 of these institutions offering sections completely online (Tobolowsky et al., 2005).

In 2001, Gray's qualitative single case study examined online college success courses at a more in-depth level by focusing on the application of transformative learning theory and emotional intelligence principles in an online community college student success course at Valencia Community College (n.d.). Gray (2001) found that there was a heightened level of connectedness, intimacy, and interaction with classmates in the online discussion posts. Some students noted that this was not possible in the traditional classroom due to lack of time to speak, lecture format, and comfort level. According to the results of the study, the online environment is highly conducive for creating a community of learners where self-reflection comes with the territory (Gray, 2001). Many others have researched the efficacy of online college success courses. In 2006, Wendy Tighe studied the Virginia Community College System and the increase of the web-based, online orientation course "College Success Skills." She concluded that student course completion rates, satisfaction, academic success, persistence, and graduation rates are well-established and evident for the traditional orientation course; however, she concluded these variables are underdetermined for the online courses and more investigation of these variables for the online courses in Virginia needs to be done (Tighe, 2006). Likewise, in 2009, Mark Kelso conducted an online orientation study with specific feedback from the students themselves. Approximately 80 percent of first-time graduate and undergraduate participants in the online environment agreed that educational institutions should

offer a pre-assessment course to online students and approximately 55 percent of the participants reported that they believed that educational institutions should offer a mandatory online orientation course (Kelso, 2009).

Indeed, if first-year seminars/college success courses show significant benefits in retention, grade point averages, completion of courses, obtaining certificates and degrees, and transfer rates for community college students, then colleges should consider making such courses mandatory (CCSSE, 2008, 2010; Hanover Research Council, 2011; Hunter & Linder, 2005; J. Jarret personal communication, September 8, 2011; Kelso,2009; McCabe, 1998; O'Gara et al., 2009; Vosberg, 2006; Zeidenberg et al., 2007). O'Gara et al. (2009) further recommend that colleges consider making student success courses a requirement for all degree-seeking students (part-time and full-time). They are not alone in this thought; Gardner and Hansen (2003) similarly emphasize that orientations/ freshman year seminars should be mandatory, and Kelso (2009) also concludes that online students should have a mandatory online orientation in the online environment.

Rio Salado College

Maricopa County Community College District. The Maricopa County Community College District, located in Arizona, is one of the largest providers of higher education in the United States. Maricopa County Community Colleges consists of ten colleges, two skill centers, and numerous education centers; all dedicated to educational excellence and meeting the needs of businesses and the citizens of Maricopa County (Maricopa County Community College District,

2011). More than 260,000 students attend the Maricopa Community Colleges each year, taking credit and non-credit courses (Maricopa County Community College District, 2011). Maricopa Community Colleges offer 1,000 occupational degrees and certificate programs, 37 academic associate degrees, and a total of 10,254 courses (Maricopa County Community College District, 2011).

History of Rio Salado College. In 1978, the Maricopa County Community College District launched Rio Salado College as a community college that specifically utilized alternative instructional delivery methods, becoming among the nation's first "colleges without walls" (Auguste et al., 2010; Christensen & Eyring, 2011; Lumina Foundation, 2011). Those delivery methods include correspondence courses that can range from print-based (mail-based), and mixed-media (audio and television components), to face-to-face courses in the day, evenings, and weekends at various locations in the country. In 1996, the college became a pioneer in online education (Christensen & Eyring, 2011). In terms of a student headcount, Rio Salado College has approximately 70,000 credit and non-credit students annually, making it the largest college in the Maricopa system and the largest online community college in the nation, with online enrollments totaling over 43,000 students (Auguste et al., 2010; C. Bustamante, personal communication, September 8, 2011; Rio Salado College, 2009-2010; Lorenzo,2011; Lumina Foundation, 2011). Rio Salado offers over 600 online courses with 48 weekly start dates in a calendar year (Bustamante, 2011).

Rio Salado College's current state. The mission of Rio Salado College is to transform the learning experience through choice, access, flexibility,

customized high quality learning design, personalized service, and organizational responsiveness (Rio Salado College, 2009-2010; HCM Strategists, 2011). In a report dated November 2010 by McKinsey Education and the Gates Foundation (HCM Strategists, 2011), Rio Salado College is currently recognized as one of eight institutional models that will help lead the country to a higher degree attainment in 2020 using a cost-effective model. The report highlights how Rio Salado College is leveraging technology to become more cost-effective by designing single courses with multiple sections and substituting full-time faculty with part-time faculty. The report shows that the college also made core support services more efficient by introducing lean processes, organizational redesign, and better purchasing methods (Auguste et al., 2010). The report describes those core support services as institutional support (human resources, institutional technology, and finance), student services (financial aid, counseling, and enrollment), academic support services (libraries, audio/visual services) and plant operations (Auguste et al., 2010).

Rio Salado's current initiatives include converting from paper-based to electronic systems, cross-training staff to eliminate staff downtime, and using self-service online portals for administering financial aid (Auguste et al., 2010). HCM Strategists, an independent consulting firm, featured Rio Salado in *Beating the Odds*, a report funded by the Gates Foundation that profiles institutions doing a noteworthy job serving and graduating non-traditional students (C. Bustamante, personal communication, September 8, 2011; HCM Strategists, 2011). The Bill and Melinda Gates Foundation also recognized Rio Salado College as 1 of 12

highly performing online institutions at two Gates Foundation Convening Sessions, which were summit meetings held at Rio Salado College and attended by higher-education and policy leaders from across the nation, (C. Bustamante, personal communication, September 8, 2011).

In August 2011**,** Lumina Foundation's *Focus* magazine featured Rio Salado College in a cover story. The article, entitled "Flexing the Faculty: When These Few Educate 60,000, Productivity Rules," focuses on Rio Salado College's innovative, low-cost, high quality, and productive higher education model (Lumina Foundation, 2011). The article highlights the college, its unique "one course many section model" and strong adjunct faculty model with 22 full-time faculty supervising 1,400 adjunct faculty (Bustamante, 2011; Lumina Foundation, 2011). Rio Salado has also been recognized by the Lumina Foundation as a promising model that can be studied, adapted, and/or adopted (Lumina Foundation, 2010). The Lumina Foundation highlights that the college has weekly start dates and provides the opportunity for students to accelerate their learning through an eight week option for a majority of the college's courses (Lumina Foundation, 2010).

Rio Salado College is primarily online (80 percent of students take online classes) and has focused on providing 48 weekly asynchronous start opportunities for most of its courses including online college success courses. The success of this offering is obvious; many students in the Maricopa County Community College District have taken at least one college course from Rio Salado because of its convenience and flexibility. Rio Salado has extended educational access to

students who found traditional college to be out of reach in Arizona, nationwide, and around the world (Bustamante, 2011). Rio Salado College is the fastest growing public two-year college in the nation (in schools with enrollments greater than 10,000 students), according to *Community College Week* (Bradley, 2011). Rio Salado College values innovation and change and is steadfast in its commitment to providing viable solutions to its students (Rio Salado College, 2010-2011).

Completion challenges. Rio Salado College, along with most community colleges in the nation, desires an increase in degree completers. At present, Rio Salado's graduation rate is 45 percent of first-time, full-time students completing within three years, although graduation rates for part-time students are typically much lower (Complete College America, 2010). According to Rio Salado's official Website, degree and certificate completion averages closer to 17 percent of the students who indicated they were degree-seeking (Rio Salado College, 2011b). These numbers do not reflect the students who are taking supplemental courses with weekly starts and are simultaneously pursuing their degrees at other Maricopa County Community Colleges or state and private universities. Rio Salado courses increase students' chances of degree completion at their home institution, but these student numbers are not reflected in the college's graduation rate (Rio Salado College, 2011b).

In addition to the measures already taken, Rio Salado College is in the beginning stages of adopting a college-wide student success initiative to increase degree completion. The college is working on a tracking system in which students

will indicate whether they are working toward a certificate or degree with Rio Salado, pursuing a degree with another Maricopa community college, merely seeking personal knowledge, or trying to obtain a certain skill (Rio Salado College, 2010-2011). These results will help Rio Salado know how to better serve each type of student, because the college espouses the notion that along with access and flexibility, there needs to be accountability for both the school and its students. The college also plans to ensure that clear pathways are in place, along with support services such as orientation, tutoring, advisement, financial aid, and help desks in technology and instruction (Rio Salado College, 2010-2011). Rio Salado College has mastered access, but is starting to shift its focus to increasing degree completion.

Rio Salado's Online College Success Course

Rio Salado College has been offering CPD 115 (College Success, 1 credit) online since July 2009 and the CPD 150 (Strategies for College Success, 3 credits) since January 2010. CPD stands for Counseling and Personal Development. CPD 115 (College Success, 1 credit) is a course that teaches strategies for college orientation, personal growth, and study skills development. CPD 150, like CPD 115, teaches college orientation, personal growth, and study skills, but additionally covers educational and career planning. The main difference between the two courses is that the CPD 150 course provides several weeks of a career exploration component while the CPD 115 does not (see Appendix B for all course competencies for CPD 115 and CPD 150, Maricopa County Community College District Center for Curriculum and Transfer

Articulation, 2011a; Maricopa County Community College District Center for Curriculum and Transfer Articulation, 2011b).

While online offerings of these courses is a relatively recent development, Rio Salado College had been offering CPD 150 (3 credits) for over eight years in a face-to-face format as the first course in a program called Adults Achieving a College Education (ACE). ACE students are those studying for their GED while taking college courses. On the other hand, the CPD 115 class was developed to follow the Maricopa County Community College District's system-wide program called *I Start Smart*, to help students get started on the right track; this program includes mandatory orientation to college, mandatory advisement, mandatory assessment in English, math, reading, and proper placement in courses. The program also requires that students who place into at least one developmental education course complete a college success course (either CPD 115 or CPD 150). Counselors in the Maricopa District decided to create the CPD 115 (1 credit) to meet the mandatory college success course requirement of the *I Start Smart* program. Both courses transfer as elective credit to all three Arizona state universities. Currently, Rio Salado College does not require mandatory orientation, advisement, assessment, placement, or college success course completion. Rio Salado is the only college in the Maricopa County Community College District that does not require the college success course for any targeted student populations such as developmental education, degree seeking, first- time full-time, or first time part-time (Maricopa County Community College District, 2009; Rio Salado, 2010-2011).

Correspondingly, student enrollment in Rio Salado's college success course is very low compared to required first-year courses such as English 101 (First-Year Composition), with over 3,600 students enrolled in Summer and Fall 2010 and Psychology 101 (Introduction to Psychology), with over 1,800 students enrolled in Summer and Fall 2010 (Radovich, 2011). CPD 115 had 45 students enrolled in Summer and Fall 2010 and CPD 150 had 110 students enrolled during that same time frame. CPD 115 enrollments have remained steady each semester, and CPD 150 enrollment has increased 20 percent each semester. Neither CPD course is in the top 25 courses for enrollment at the college (Radovich, 2011).

Rio Salado College success courses, developed by a part-time college counselor, are currently taught by adjunct faculty/part-time college counselors. All counseling adjunct faculty receive training from the course developer before teaching a section. Adjunct faculty are in constant communication with the developer/trainer and counseling faculty chair. There is also an adjunct counseling portal with relevant information regarding course procedures, announcements, and assignments. This portal is accessible to faculty only after they attend training and obtain log-in information.

To date, student evaluations for both courses have been positive (Rio Salado College, 2009, 2010, 2011c). Student evaluations primarily contain questions relating to instructor communication and feedback on assignments and use the same format for all courses at Rio Salado College. There is no specific question that directly asks about course content, although there is a blank space where students can write additional comments. Only a small percentage of

students actually complete the student evaluations since they are optional and do not impact their grade. Typically, the lack of any evaluation of course content suggests the need to conduct further evaluation.

Survey Instrument

The Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report instrument designed to assess college students' motivational orientations and their use of different learning strategies for a college course (Pintrich et al., 1991). The MSLQ is useful in measuring effectiveness of college success courses because it measures motivations, learning strategies, time management skills, test anxiety and self-efficacy. The authors of the MSLQ describe the development of the instrument, which began formally in 1986 (informally in 1982) as part of a research project through both the National Center of Research to Improve Postsecondary Teaching and Learning and the School of Education at the University of Michigan (Benson, 1998; Pintrich, Smith, Garcia, & McKeachie, 1993). The authors used early instruments to evaluate the effectiveness of their "Learning to Learn" class, an introduction to cognitive psychology course at the University of Michigan that taught students how to use learning strategies to become lifelong learners (McKeachie, Pintrich, & Lin 1985; Pintrich et al. 1991). These instruments were used with over 1,000 University of Michigan undergraduates enrolled in the authors' course (Pintrich et al., 1991, 1993). Several rounds of data were collected from 1986 to 1987 to revise and construct the 15 subscales of the MSLQ. Today, the six motivation scales include: intrinsic goal orientation, extrinsic goal orientation, task value, control of leaning beliefs,

self-efficacy for learning and performance, and test anxiety. The nine learning strategy scales include rehearsal, elaboration, organization, critical thinking, self-regulation, time and study environment, effort regulation, peer learning, and help seeking (Pintrich et al., 1991, 1993). Thus, the tool's subscales are empirically derived on the basis of item and factor analyses (Benson, 1998). Pintrich et al. (1993) state that the 15 different scales on the MSLQ can be used together or singly; the scales are designed to be modular and can be used to fit the needs of the researcher or instructor. This research utilized all 15 scales in both the pre-test and the post-test.

The MSLQ is the product of quality research performed at the University of Michigan in the areas of teaching and learning (Gable, 1998). The questionnaire was normed with a sample of 380 students in 14 subjects and five disciplines at higher education institutions in the Midwest (Saxon, Levine-Brown, and Boylan, 2008). Furthermore, the tool's manual includes thorough descriptions of each scale, as well as relevant statistics, such as internal reliability coefficients, means, standard deviations, and zero order correlations with final course grade for each item and scale. Also, the scale correlations are significant, demonstrating predictive validity (Pintrich et al., 1991).

Chapter 3 Research Methodology

Action Research

Action research is common in educational settings. It is particularly relevant for improving practices in education because it provides a frame of reference that permits the researcher to be intimately familiar and involved at a professional level with the phenomenon (Corbin & Strauss, 2008; Herr & Anderson, 2005; Mills, 2003; Noffke & Somekh, 2009). Action research also focuses on research questions of immediate interest and operates on the assumption that results cannot be generalized, but can be applied to practitioner settings (Mills, 2003; Thomas, 2004). Once the researcher identifies an area of focus (Mills, 2003), action research begins by asking the question, "How can we improve this situation?" (Reason & Bradbury, 2008, p. 17). Information is gathered with the goal of gaining insight, developing reflective practice, affecting positive changes in the school environment and on educational practices, and improving student outcomes and the lives of those involved (Mills, 2003).

As the faculty chair of the counseling department at Rio Salado College, the researcher is responsible for assessing the effectiveness of the interventions provided by the counseling department, including the college success courses. As an insider in the organization, this researcher is positioned to collaborate with other insiders to improve student success at Rio Salado College (Herr & Anderson, 2005). Action research allows for design and execution of studies outside of traditional scientific methodologies through utilization of specifically chosen samples on a smaller scale (Thomas, 2004). Thus, action research provides

the tool with which the researcher can measure the effectiveness of the college success courses offered at Rio Salado College as well as determine how to improve their effectiveness.

Knowledge gained through action research can liberate students, teachers, and administrators and enhance learning, teaching, and policy making (Mills, 2003). This researcher uses action research to enhance student success at Rio Salado College, starting with assessing students' perceptions of the effectiveness of success courses dealing with college readiness in an online environment. Students' perception is a valid predictor of success because it is directly correlated to perceived self-efficacy. Understanding the effectiveness of the courses allows the researcher and her colleagues to strategically plan for expanding the access to these courses and correspondingly influencing student success and completion rates at the college.

Research Design

This study was conducted from March through October 2011 and examined two online elective student success courses: CPD 150 (College Success, 3 credits) and CPD 115 (Success Strategies, 1 credit) offered by Rio Salado College. These college success courses are available for any student at Rio Salado College as elective credit. Students who are new to online learning or college, transitioning back into college, or who have struggled (failed or have a low grade point average) in their Rio Salado coursework are highly encouraged to take these courses. Enrollment in college success courses is low; over the Summer and Fall 2010 semesters, CPD 115 had 45 students and CPD 150 had 110 students which

is low when compared to other basic courses during the same time period such as English101 (First Year Composition) with 3,600 students enrolled and Psychology 101 (Introduction to Psychology) with over 1,800 enrolled in Summer and Fall 2010 (Radovich, 2011). Although enrollment in these courses is highly recommended by advisors, counselors, faculty, and staff, they are not required as an introductory course to the college and are not required for a degree or certificate program. This researcher believes that these courses will be even more effective in influencing the college's completion rates if they are mandatory at Rio Salado just as they are at the other colleges in the Maricopa District. Measuring students' perceptions of acquisition of student skills through these courses by those who take it as an elective is the first step in testing this hypothesis.

The design of the study was a single-group, pre-test/post-test design. In other words, this design involves a pre-test measure followed by a treatment and a post-test for a single group (Creswell, 2009). The treatment was the aforementioned online courses, CPD 150 and CPD 115. The study measured only the student success curriculum within the 3 credit hour course and not the entire course curriculum (i.e., career exploration curriculum was not measured).

Because the course competencies of college success (see Appendix B) center on the students' development of academic success skills, the study measured whether students perceive they effectively learned these skills as a result of the college success course (see Appendix A) by analyzing the pre-test and post-test survey results.

As Counseling Faculty Chair for Rio Salado College, the researcher oversaw development of the college success courses, hiring of instructors, and training of instructors to teach these courses. Although the researcher is not currently teaching these courses, the researcher oversaw the instructors who taught these courses and could monitor instructor feedback as well as have access to students' submission of assignments and the virtual grade book. The researcher attempted to ensure that personal biases and instructor biases did not interfere with research results. Although the researcher is passionate about these courses and believes they contribute to student success, the researcher wanted to focus the research study on whether students' perceptions regarding their study skills increased to better understand the effectiveness of the success courses in preparing online learners for their future course work. A quantitative study was used to control for researcher bias and instructor bias. According to Morrison, Ross, Kemp, and Kalman (2010), a quantitative assessment of instructional strategies significantly lessens researcher bias or loss of objectivity in interpreting the benefits of new forms of instruction. In addition, these authors contend that quantitative results allow for a comparison of the efficiency of learning.

Operational Definitions

The treatment for this study is CPD 115 and CPD 150. Specifically, CPD 115 (College Success, 1 credit) is an eight week online course offered by Rio Salado College. It instructs students in college orientation, personal growth, and study skills development. CPD 150 (Strategies for College Success, 3 credits) however, is a twelve week online course offered by Rio Salado College. It

provides college orientation, personal growth, study skills development and career planning instruction. The main difference between the two courses is that the three credit course provides several weeks of a career exploration component while the one credit course does not. For this research study, the career exploration component was not measured since it is not in both courses. During the duration of the study (March-October 2011) students completed two required assignments in both courses, a pre-test assessment and a post-test assessment, utilizing the Motivated Strategies for Learning Questionnaire (MSLQ) survey tool. This tool is a self-report instrument designed to assess college students' motivational orientations and their use of different learning strategies for a college course (Pintrich et al., 1991).

The treatment group was a convenience sample from CPD 150 and CPD 115 with a start date between March 7, 2011 and September 12, 2011. Students who gave permission to use these two assignments (e.g., the pre- and post-test of the MSLQ) were considered for inclusion in the sample.

Setting of Action

The study took place through Rio Salado College, a Maricopa Community College, in Arizona, U.S. With over 43,000 total online student enrollments, Rio Salado College is a premier online college in the country with multiple sites across Maricopa County. The study was conducted in all offerings of two online college success courses, CPD 150 and CPD 115 starting between March 7, 2011 and September 12, 2011.

Participants

All students enrolled in all sections of the online courses, CPD 150 and CPD 115 starting March 7, 2011 through September 12, 2011, were recruited to participate in this study. During the first week of each course, the first assignment in both courses was to complete the MSLQ. Students were asked at the beginning of the assignment whether they wanted to allow two of their assignments (the pre- and post-test) to be used in a research study to evaluate the effectiveness of the college success course and improve the current online college success courses at Rio Salado College. Participants were informed that their participation was completely voluntary. In Lesson 7 in both courses, students were asked to take the MSLQ again. At the end of the MSLQ post-test, students who initially consented had the option to "opt-out" before submitting their answers to the survey. The individual survey data were used only once the second consent was secured.

Since the sample was taken from online community college success courses, online pre-test and post-test data allowed students to participate at their own pace, time, and space (Suzuki, Ahluwalia, Arora, & Mattis, 2007). Students were able to enroll in the success course every week, doing the lessons during any time of the day, and in any space they chose (such as their home). Also, participants of the study were added every week (asynchronous classes start every Monday) until September 12, 2011. Therefore, students started at a variety of different dates between March 7 and September 12, 2011. The study started in March 2011 when other changes to the course were being made; this was the first opportunity the researcher had to add the MSLQ. Originally the study was going

to end in July 31, 2011; the end date was extended until October 31, 2011 to obtain a larger sample size.

Survey Instrument: Motivated Strategies for Learning Questionnaire

The MSLQ was one of many instruments examined for this study. Other instruments considered include the Learning and Study Strategies Inventory (LASSI), Survey of Students Assessment of Study Behaviors (SSASB), Beginning College Survey of Student Engagement (BCSSE), College Students Expectation Questionnaire (CSXQ), and Study Behavior Inventory v. 2.0 (SBI). The MSLQ best met several criteria for this study. The first criterion was that the instrument could be used in a pre-test/post-test study. Only three of the above mentioned instruments met this important criterion: the LASSI, the SSASB, and the MSLQ. The second criterion was that it could be taken online. Only the LASSI and MSLQ met this criterion. The third criterion was that the assessment would be affordable, so that no student fees would be added to the course. The MSLQ met this criterion, but the LASSI did not.

In addition, the MSLQ was selected because it was developed by those who had used it to assess their "Learning How to Learn" course, an introductory cognitive psychology course that taught students how to use learning strategies to become lifelong learners (McKeachie et al., 1985; Pintrich et al., 1991). This "Learning How to Learn" course addresses very similar outcomes as Rio Salado's College's college success courses: teaching learning strategies to promote lifelong learners. Also, the MSLQ matched the competencies of CPD 115 and CPD 150 better than the other instruments. In total, the MSLQ met nine out of fifteen

required course competencies for CPD 150, the three credit course. Out of the competencies not met, four of the six were related to career exploration. Career exploration was not associated with any tools examined for this study; therefore, this study did not assess student perceptions related to the career exploration learning units in the CPD 150 course. In the end, the MSLQ met six out of the nine competencies for CPD 115, the one credit course (Appendix A). The MSLQ measures students' perceptions of the following course competencies in the college success courses at Rio Salado College: study skills, self-efficacy, test anxiety, time management, communication, goal setting, critical thinking, and effective behavior in higher education. The MSLQ, therefore, is a valid instrument for this study because it was developed for a similar course and purpose. It is especially reliable since it was tested on 1,000 students at the University of Michigan in the introduction to cognitive psychology course before it was normed.

The 81 items on the MSLQ are scored on a seven-point Likert scale, from 1 (not at all true of me) to 7 (very true of me). There are two sections to the MSLQ: a motivation section and a learning strategies section (see Appendix C). The motivation section consists of 31 items in six subscales (see Appendix D) that assess students' goals and beliefs for a course, their beliefs about their skill to succeed in a course, and their anxiety about tests in a course (Pintrich et al., 1991, 1993). This section of the MSLQ is useful in assessing students' perceptions regarding their study skills, and consequently the effectiveness of these two courses because it measures goals, beliefs about success, and test anxiety. All of

these items correspond with the college success course competencies. The other section regarding learning strategies includes 50 questions: 31 items regarding students' use of different cognitive and metacognitive strategies and 19 items concerning student management of different resources (Pintrich et al., 1991, 1993). These 50 items fit into 9 subscales (see Appendix D). The learning strategies section of the MSLQ is useful in assessing students' perceptions regarding their study skills and the effectiveness of the courses because it measures different study strategies, time management, and study environments. All of these items correspond with the college success course competencies.

For the purpose of this study, two of the learning subscales of the MSLQ were not used: subscale 14, peer learning, and subscale 15, help seeking (asking for help by peers). The researcher eliminated these subscales from the study because their questions are focused on peer learning. Currently both CPD courses are set up for 48 asynchronous start dates a year. Peer learning is not required in these course and online discussion boards are optional, so many of these questions did not apply to this study.

Data Collection

The MSLQ questionnaire was a required activity within the course curriculum from March 7, 2011 until October 31, 2011. All students enrolled in CPD 150/115 during this time completed the MSLQ survey as part of their coursework. At the beginning of their course, students were asked if they consent to allowing their (anonymous) responses to be used in a research study to improve the course (see Appendix E). Students who accelerated the course were not

included in the study even if they agreed to participate. Research shows that habits are formed over a 21 day time span (Maltz, 1960). A seven week time period from the pre-test and post-tests gave students enough time to start forming productive study habits and time management skills. Students who were included in the study had to agree to the pre- and post-tests and took seven weeks in between to complete both the pre- and post-tests.

Neither the researcher nor the instructor for each course knew which students chose to participate in the study; participants' identities were kept anonymous, ensuring students' performance in the course was not affected (via penalty or incentive) due to their participation (or lack thereof) in the study. If a student had agreed to participate in the study, he or she indicated his or her consent by virtually signing a consent form that allowed two assignments containing the pre-test (class assignment #1) and post-test (class assignment #7) of the MSLQ to be used in the study. Approximate ages for the participants were calculated using the MSLQ demographic data (question number two) that asked the participant to fill in high school graduation date (see Appendix C). The samples' age information was compared to the age of the entire distance population of Rio Salado College in Chapter 4. However, it is important to note here that the sample may have included students under the age of 18, as Rio Salado allows the enrollment of minors in classes with their parent/guardian's consent as indicated by signing a special form requesting for admission to the college (see Appendix I). Participants were informed that their participation was voluntary and they had a choice not to participate in the study. At the end of the

post-test, students who initially consented had the option to "opt-out" before their responses for both the pre-and post-test were used in the study.

When using online instruments, the investigator made sure risks to the research subjects were minimized. Risks were minimized by making sure the online survey site was secure and the data password protected so that only the investigator and the manager of the college's online assessment tool had access. Risk was reduced because participants went to a secure survey site, the college's online assessment tool called Perception by Question Mark, in Rio Salado's learning management server called Rio *Learn*. This online assessment tool is a technically secure computing platform that uses access passwords, up-to-date software, anti-virus/spyware, and firewall protections. Retrieval of information from this site was encrypted by passwords that only the investigator and the manager of the college's online assessment tool had. All passwords met institutional security standards to protect the database from intruders. As Counseling Faculty Chair for Rio Salado College, it is the researcher's responsibility to assess the quality of the curriculum and access student data under the Federal Education Rights and Privacy Act (FERPA). No names were identified and confidentiality was maintained at all times, minimizing risk to participants in accordance with FERPA.

Limitations

A limitation of the study's data collection and management was the strict timelines the researcher/supervisor of the college success courses needed to change course content, which was required for including the MSLQ pre- and post-

test assignments into the course. Since some minor changes were already being made to the March 7 start dates for both courses, all of the modifications to the course (including the MSLQ) had to be turned in to the instructional design department by mid-January 2011. Once changes to the course were implemented the researcher could not make modifications to the study since Rio Salado College uses a one course/many sections format and changes must be made to all sections of a course offering.

The Likert scale used in the MSLQ has limitations as well (Brill, 2008; Stoutenborough, 2008; Wivagg, 2011). *The Encyclopedia of Survey Research Methods* (Brill, 2008), says acquiescence response bias is the tendency for respondents to agree with statements regardless of their content. Acquiescence response bias is likely to be strongest among respondents low in ability and motivation (Brill, 2008). Acquiescence bias can result when respondents choose to agree with statements because of a desire to choose what they believe is the "correct" or otherwise most appropriate answer (Wivagg, 2011). Acquiescence bias may have occurred in this study. Students might have answered the questions how they thought they should versus their true answer.

Also, the Likert scale implements forced choice, meaning the requirement of a response could encourage respondents to answer a question in a way that does not truly reflect what they think and feel (Wivagg, 2011). Forced choice's primary disadvantage is that it can contribute to measurement errors, nonresponse errors, or both (Wivagg, 2011). Some respondents really may not know how they

feel about an issue or may not know the information requested, and forcing a response would result in the collection of erroneous data (Wivagg, 2011).

Central tendency bias may result from respondent reluctance to select extreme response categories (Brill, 2008). Similarly, social desirability bias may result when respondents attempt to portray themselves or an organization to which they belong in a favorable light (Brill, 2008). Researchers typically try to mitigate these effects by varying attitude statements so that some are expressed in a positive form while others are expressed in the negative, which the MSLQ does throughout the questionnaire (Brill, 2008). If respondents give socially desirable answers, it will negatively impact the reliability of the measure. Also, if a respondent begins to consistently answer in the same way (e.g. selecting all neutral or always agree), the reliability must be questioned (Brill, 2008).

In this study, another limitation was that participants were not trained or given any guidance on how to rate their responses to items in the instrument. It was assumed that all participants had the same definition of the answers on the seven point Likert scale from "not at all true of me" to "very true of me" although only answer 1 and 7 were defined with words and numbers 2, 3, 4, 5, and 6 were not. Assuming participants understood the Likert scale without words is a valid limitation of the study (Stoutenborough, 2008).

Data Analysis

Regular monitoring of completion of surveys occurred through the end of October 2011. Results of the pre-test/post-tests of students who agreed to participate in the study were analyzed to see whether there was a difference in the

students' responses on the MSLQ after their participation in one of the two college success courses CPD 150 (College Success, 3 credits) and CPD 115 (Success Strategies, 1 credit). The MSLQ measures student perceptions of most of the learning outcomes that the college success courses purport to teach. A change in the students' scores on the measure suggested that the course was the reason for the change in scores.

The pre-test/post-test data were analyzed by examining summary data regarding the entire sample and using Statistical Package for the Social Sciences (SPSS), a statistical computer application, to analyze the results (Pearson, 2010). Trends in the data of the entire sample, such as a positive change in the data between the pre-test and the post-test, were examined, with any outliers or unusual values excluded from the study. Then descriptive features of the sample were compared to the population of Rio Salado students to determine whether these students were representative of the broader student body. Descriptive analysis of the sample provided the mean difference between the pre- and post-tests, the standard deviations, and the range of scores (Creswell, 2009; Pearson, 2010).

Paired samples *t*-tests (also called a within-subjects *t*-test) are performed when a researcher wants to determine whether a single group of participants differ on two measured variables (Decoster, 2004). Paired sample *t*-tests (or repeated–measures test) for the motivation scale and its six subscales, along with the learning scale and its seven subscales (See Appendix D) were used to identify any significant differences between the pre- and post-tests (Creswell, 2009; Pearson,

2010). Results were evaluated against a *p* value that is less than .05 to identify statistically significant differences (Pearson, 2010). Results were compared against an alpha level of .05. Alpha level .05 is the most common level used in social science research and the accepted norm. A most common use of this test would be to compare participants' response on a measure before a manipulation (e.g. an intervention or course) to their response after a manipulation (Decoster, 2004). Paired samples *t*-tests work by first computing a difference score for each participant between the within-subject conditions (e.g., post-test, pre-test). The mean of these difference scores is then compared to zero (Decoster, 2004). This is the same as determining whether there is a significant difference between the means of the two variables (Decoster, 2004). Rosenthal (1991) recommended using the *t* value to calculate effect size, a metric called r^2. Effect size is the percentage of variance explained by the difference between the pre- and post-tests (Ferguson, 2009). Interpretation of the size of an effect was done using Ferguson's (2009) criteria.

Since this was an action research study measuring students' perceptions of the effectiveness of success courses dealing with online college readiness using a pre- and post-test, a paired samples *t*-test was appropriate for determining any significant difference between the pre- and post-test. In summary, the data analysis was intended to determine if measures of students' perceptions of their own college readiness increased after taking one of the college success courses. Assumptions about the effectiveness of the success courses (CPD 150 and CPD 115) will be based in part on the students' perceptions.

Chapter 4 Data Analysis and Results

Introduction

The purpose of this action research study was to determine the effectiveness of preparing students to be college ready by examining motivation and learning skills in two online college success courses: CPD 115 (College Success, 1 credit) and CPD 150 (Strategies for College Success, 3 credits). The effectiveness of the course was determined by analyzing the pre- and post-test survey results of the Motivated Strategies for Learning Questionnaire (MSLQ) over a seven week time period, allowing students enough time to start forming productive study habits and time management skills (Maltz, 1960).

This chapter will present findings first in the form of descriptive analysis of the sample, which will indicate mean, standard deviations, and range of scores (Creswell, 2009; Pearson, 2010). Then a paired *t*-test was used to analyze the MSLQ's two main scales, motivation and learning scales, as well as their 13 subscales (see Appendix D) so as to determine whether measures of students' perceptions of their own college readiness increased after taking one of the college success courses. As such, assumptions about the effectiveness of the success courses (CPD 150 and CPD 115) are based in part on the students' perceptions.

Descriptive Analysis

Sample. Out of 474 students who enrolled in both CPD courses from March 7, 2011 to October 31, 2011, 241 students completed one of the courses during Spring and Summer of 2011 (Fall completion numbers are not available

until after this dissertation will be defended), and 113 students agreed to participate in the study. Of the 113 students, 93 were eligible to be included. Eligibility was first determined by student consent before taking the pre-test during the first lesson in each CPD course (see Appendix E). At the end of the MSLQ post-test, students who initially consented had the option to "opt-out" before submitting their answers to the survey. The individual survey data was not used until the second consent was secured.

Twenty students took less than seven weeks (not enough time to allow students to start forming productive study habits and time management skills) between the pre- and post-tests, making them ineligible (Maltz, 1960). An additional two students were not eligible for inclusion in the study; one student did not answer many of the pretest questions, and another student only answered all questions with extreme outliers of a 1 or 7 (Brill, 2008). If a respondent begins to consistently answer in the same way (e.g., extreme outliers such as '1' and '7'), the reliability must be questioned, and it is best to exclude these answers (Brill, 2008).

The majority of the sample came from students enrolled in CPD 150 with a total of 70 students participating (77%); Twenty-one students (23%) enrolled in CPD 115. This is representative of the enrollment numbers for both courses (348 in CPD 150 and 126 students in CPD 115).

Demographic data. A basic demographic questionnaire, which was part of the MSLQ design, consisted of nine questions that collected gender, age range,

ethnicity, educational background, year in school, reasons for taking this class, and hours worked per week (see Appendix C).

Gender. Of the 91 students in the study, 71 (78%) were female and 20 (22%) were male. This differs from the distance population of Rio Salado College, where 68% of 43,093 distance learning students are female (Rio Salado College, 2011b).

Age. Approximate ages for the participants were calculated based upon the reported high school graduation date. Rio Salado College collects age data based on the birthdate a student enters on the application to the college. The age ranges for the samples were also different from the general Rio Salado population (see Table 1). There were 10% more students 19 and under compared to the general distance population of the college. The study occurred over the summer, when some students in our ACE Puente program (free program for at-risk minority high school students) were not able to attend an in-person CPD course so they attended online. The 20-29 age group of the sample was 16% lower compared to the general distance population of the college. The 30–39 age group was also lower (7%) compared to the distance population of Rio Salado College. The 40–49 age group was 10% higher than the college's distance population. Eight percent of the sample's ages were unknown based on the question that indicated their high school graduation year (see Demographic Data Question 2 in Appendix C). If students indicated they received a GED or did not graduate, the researcher was not able to calculate age since graduation from GED can occur at any age.

Table 1

Student Age Groups

Age Group	Number of Participants	Sample Percentage	Rio Salado Distance Population Percentage
19 and under	17	19%	9%
20-29	27	30%	46%
30-39	16	18%	25%
40-49	21	23%	13%
50+	3	3%	7%
Unknown	7	8%	10%

Ethnicity. The ethnicity of the sample was similar to that of the student population at Rio Salado College as evidenced in Table 2 (Rio Salado College, 2011b). Although the MSLQ did not have an indicator for the group American Indian, it is assumed that participants who identified as American Indian selected the 'Other' category.

Table 2

Ethnicity

Background	Number of Participants	Percentage of Participants	Percentage of Distance Students at Rio Salado College
Asian	3	3.3%	3.5%
African-American	9	9.9%	10.7%
Latino	13	14.3%	13.6%
Other	9	9.9%	10.6%*
Caucasian	57	62.6%	61.7%

*Includes American Indians at 1.9% and Pacific Islander at 0.1%.

Year in school. Both CPD 115 and CPD 150 are beginning college courses, and yet half of the sample population consisted of sophomores. The sophomores totaled 46 participants equaling 51% of the sample, while freshmen totaled 45 participants equaling 49% of the sample.

Reasons for taking this class. Almost all of the participants (96%) agreed that the CPD course would be useful to them in other courses and would help them improve their academic skills (96%). A large number of the sample thought that the content seemed interesting (82%), and that the course would improve their career prospects (79%). These answers show that participants valued the course and the content being taught. Some students indicated this course was required; 24% thought all students were required to take this course, even though this course is an elective (see Table 3).

Table 3

Reasons For Taking This Class

	Number of Participants		Percentage of Participants	
	Yes	No	Yes	No
Fulfills Distribution Requirement	51	40	56%	44%
Content Seems Interesting	75	16	82%	18%
Is Required of All Students at College	25	65	28%	72%
Will Be Useful to Me in Other Courses	87	4	96%	4%
Is an Easy Elective	29	62	32%	68%
Will Help Improve My Academic Skills	85	4	96%	4%
Is Required for Major (Program)	22	69	24%	76%
Was Recommended by a Friend	22	68	24%	76%
Was Recommended by a Counselor	50	40	56%	44%
Will Improve Career Prospects	70	19	79%	21%
Fits into My Schedule	66	21	76%	24%

Hours worked per week. Students also indicated how many hours they worked during the week, with 46% of students in the sample indicating they

worked forty hours or more. This is a large number considering 25% of the entire sample indicated they were full-time students (4 classes or more). Therefore, 11% percent of the entire sample was working full-time and attending school full-time (4 classes or more, see table 3). Fifteen percent of the entire sample worked at least 30 hours or more a week and took 4 classes or more. Thirty four percent of the entire sample worked 30 hours or more and took 3 or more classes. The most popular reason for taking online courses reported by Nakos, Deis, and Jourdan (2002) was that online courses seem to offer the flexibility to take classes that students might otherwise be unable to take. This is evident by the amount of hours students in this sample population are working (see Table 4).

Table 4

Participant Hours Worked vs. Number of Courses (Percentages)

Number of Hours Worked	1 Course	2 Courses	3 Courses	4+ Courses
0	2 (2.2%)	12 (13.2%)	5 (5.5%)	8 (8.8%)
1 to 9	0 (0.0%)	1 (1.1%)	0 (0.0%)	0 (0.0%)
10 to 19	1 (1.1%)	1 (1.1%)	1 (1.1%)	1 (1.1%)
20 to 29	3 (3.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
30 to 39	0 (0.0%)	5 (5.5%)	5 (5.5%)	4 (4.4%)
40+	4 (4.4%)	16 (17.6%)	12 (13.2%)	10 (11.0%)

Non-working students. Approximately 30% of the sample consisted of students who do not work. Non-working full-time students who were taking four or more courses comprised 9% of the sample. Of the sample of students who were not working, 14 were taking one or two classes and 13 were taking 3 or more classes. It is interesting to note that 78% of the non-working students are female (except one student under 19) and also fall into child bearing/raising age categories (20- 49). One might speculate that a majority of the students not working and not taking a full-time course load are caring for children (see Table 5).

Table 5

Number of Classes for Non-Working Students by Gender

Number of classes	Number of Males	Number of Females	Number of Participants
1	1	1	2
2	3	9	12
3	0	5	5
4	2	3	5
5	0	2	2
6	0	1	1
Total	6	21	27

Effects of Intervention

The effectiveness of the course was determined through the analysis of paired samples *t*-tests (or repeated-measures test) for each scale (motivation and learning strategies) and subscale (motivation: intrinsic goal, extrinsic goal, task value, control of learning beliefs, self-efficacy for learning, test anxiety, and learning strategies: rehearsal, elaboration, organization, critical thinking, metacognitive self-regulation, time and study environment, effort regulation). The *t*-tests measured the presence of significant differences between the pre- and post-test scores (Creswell, 2009; Pearson, 2010). Results were evaluated against a *p* value that is less than .05 to identify statistically significant differences (Pearson, 2010).

Paired samples *t*-tests (also called a within-subjects *t*-test) are performed when a researcher wants to determine whether the participants of a single group differ on two measured variables (Decoster, 2004). Since this particular study was an action research study measuring students' perceptions to better understand the effectiveness of success courses dealing with online college readiness, a paired samples *t*-test could determine whether there was a significant difference between the pre- and post-test.

Scales. The scales of the MSLQ can be divided into two broad categories, motivation and learning scales (see Appendix D). The motivation scale consists of 31 items that assess students' goals and value beliefs for a course, their beliefs about their skills to succeed in a course, and their anxiety about tests (Pintrich et al., 1991). The learning strategies scale includes items regarding students' use of

different cognitive and metacognitive strategies. In addition, the learning scale includes 19 items concerning student management of different resources (Pintrich et al., 1991). Results showed that the learning strategies scale was statistically significant t (2253) = 4.407, $p < .05$, but the motivation scale was not statistically significant (see Table 9). When both scales were combined, results were statistically significant t (3725) = 4.696, $p < .05$, with effect size $r^2 = 0.0059$.

Table 6

MSLQ Scales Paired Samples t-tests

Scale	Mean Difference	SD of Diff.	*t*	*df*	r^2
Motivational	0.077	1.675	1.759	1471	0.0021
Learning	0.220	2.371	4.407*	2253	0.0085
Both Scales	0.163	2.124	4.697*	3725	0.0059

Note: * significant at $p < .05$

Motivation subscales. Under the motivation scale, intrinsic goal, the control of learning beliefs, and test anxiety subscales showed a mean difference change, but it was very small since all effect sizes (r^2) of the scales were under .04 (see Table 7).

The self–efficacy for learning and performance subscale under the motivation scale was significant with a mean difference of 0.299. This change was significant, accounting for 4.8% of the variance between the pre- and post-

tests t (367) = 4.298, $p < .05$, $r^2 = .48$. This subscale addresses expectancy for success and self-efficacy (Pintrich et al., 1991). Expectancy for success refers to performance expectations, and is related specifically to task performance, while self-efficacy includes judgments about ability and confidence in completing tasks (Pintrich et al., 1991). Self-efficacy for learning and performance, with a medium effect size, significantly showed that both CPD courses increased expectancy for success and self-efficacy with the students in the sample.

Table 7

Motivation Subscale t-tests

Scale	*M* Difference	*SD* of Diff.	*t*	*df*	r^2
Intrinsic goal	0.261	1.550	2.283*	183	0.0277
Extrinsic goal	0.179	1.921	-1.267	183	0.0087
Task value	0.069	1.422	0.805	275	0.0023
Control of learning beliefs	0.261	1.629	2.173*	183	0.0251
Self-efficacy for learning	0.299	1.334	4.298*	367	0.0479
Text anxiety	-0.396	2.120	-2.831*	229	0.0338

Note: * significant at $p < .05$

Motivation items. Mean differences were also found significant for individual questions. Under the motivation scale, test anxiety subscale, Item 3 and

8 were found to be statistically significant. Item 3 asks: *When I take a test I think about how poorly I am doing compared with other students.* (Pintrich et al., 1991). The mean difference for Item 3 was -0.739 and, although small, the effect size was t (45) = -2.813, $p < .05$, $r^2 = .150$. Item 8, which asks: *When I take a test I think about the items on other parts of the test I can't answer* had a mean difference of -0.804 and shows a significant reduction in test anxiety, t (45) = -2.407, $p < .05$, $r^2 = 0.110$. Combined, these reductions suggest that upon finishing the class, students perceived having less anxiety about tests and, therefore, were better equipped to do well.

Under the motivation scale, the subscale of control of learning beliefs, two items were found to be statistically significant. Item 15: *I'm confident I can understand the most complex material presented by the instructor in this course*, had a mean difference of 0.609. The score indicates an increase in student confidence, t (45) = 2.872, $p < .05$, $r^2 = .150$. Item 25: *If I don't understand the course material, it is because I didn't try hard enough*, was significant with a mean difference of 0.783 and effect size of t (45) = 2.558, $p < .05$, $r^2 = .130$. These items combined suggest that students perceive that they are gaining focus and confidence in understanding course material.

Learning strategies subscales. Under the learning strategies scale, elaboration, metacognitive self-regulation, and time and study environment subscales showed a mean difference change, but very small, since all effect sizes (r^2) of the scales were under .04 (see Table 8).

The effort regulation subscale under the learning strategies scale was statistically significant, focusing on students' ability to control their effort and attention, in other words, self-management in the face of distractions and uninteresting tasks. Effort management is important to academic success because it not only signifies goal commitment, but also regulates the continued use of learning strategies (Pintrich et al., 1991). The mean difference for the effort regulation scale was 0.429. This change was significant, accounting for 4.2% of the variance between the pre- and post-tests, t (251) = 3.082, $p < .05$, $r^2 = .04$. A significant change in this scale indicates students are learning self-management and committing to a goal by using the new learning strategies taught in the CPD courses.

Table 8

Learning Strategies Subscale t-tests

Subscale	*M* Difference	*SD* of Diff.	*t*	*df*	r^2
Rehearsal	0.043	2.452	-0.208	137	0.0003
Elaboration	0.373	2.163	2.866*	275	0.0290
Organization	0.141	2.439	0.786	183	0.0034
Critical thinking	0.104	2.281	0.694	229	0.0021
Self-Regulation	0.326	2.325	3.430*	597	0.0193
Time and study environment	0.264	2.462	2.053*	367	0.0114
Effort regulation	0.429	2.069	2.815*	183	0.0415

Note: * significant at $p < .05$

Learning strategies items. Item 57 under the learning strategies scale metacognitive self-regulation subscale was a reversed item where answers went significantly down regarding understanding the readings for the course. Item 57: *I often find that I have been reading for this class but don't know what it was all about*, was significant with a mean difference of 1.109 and an effect size of t (45) = 2.920, $p < .05$, $r^2 = .160$. This finding suggests that students perceived an increased ability in how to read the textbook at the end of the college-readiness curriculum (i.e., after the post-test). This finding may be linked to specific assignments within the curriculum pertaining to how to read a textbook called "reading logs".

Responses to Item 65: *I have a regular place set aside for studying,* under the time and study environment, subscale of the learning scale, increased, with a mean difference of 0.739 and an effect size of t (45) = 2.028, $p < .05$, $r^2 = .080$. This question showed that students value setting aside study space since taking the success course because it is emphasized in both courses.

The last item, Item 81: *I try to apply ideas from course readings in other class activities such as lecture and discussion*, also showed statistical significance. This item was part of the elaboration subscale under the learning scale. The mean difference was 0.783 and the effect size was t (45) = 2.121, $p < .05$, $r^2 = .090$. This significant difference shows that students perceive that the skills learned in this course are transferable to other activities.

Summary

Overall the students reported that they had better study skills after the course than before it. Particularly, learning strategies, test anxiety, self-efficacy, effort regulation (self-management), control of learning beliefs, study skills, and time and study environment stand out as showing substantial improvement for the students. The next chapter will discuss what these findings mean to the course and to the site of this action research.

Chapter 5 Summary, Conclusions, and Recommendations

Introduction

Community colleges are the largest and fastest growing sector of U.S. higher education; they provide a crucial gateway to postsecondary education, but fewer than half of community college students complete their program of study. That number is even lower for traditionally disadvantaged students (low-income students, students of color, and first-generation students, AACC, 2010; Miller et al., 2009; Oblinger, 2010). The benefits of community college education are many: a college educated population raises incomes and lowers poverty, creates opportunities and solves problems, reduces barriers, and elevates civic engagement (Kirwan, 2007; Rodgers 2005). Presently, the most significant barrier to college success and increasing the corresponding low graduation rates in higher education is students' lack of college readiness skills (Conley, 2010; Bowen et al., 2006; Pascarella & Terenzini, 2005; Upcraft et al., 2005).

The issue of academic preparation can be even more problematic for students in an online setting (Lorenzo, 2011). Palloff and Pratt (2003) indicate that, "Students who are taking online courses for the first time often have no idea about the demands of online learning"(p. 11). An online student must possess specific abilities and skills that include self-motivation, time-management, and technology proficiency (Bell, 2006; Kelso, 2009; Lorenzo, 2011; McGhee, 2010). Research has shown that first-year success courses help students prepare to become productive, high-achieving college students (El Khawas, 1995; Ellis, 2003; Estevez, 2005; Hanover Research Council, 2011; J. Jarret, personal

communication, September 8, 2011; Lingo, 2009; O'Gara et al., 2009; Pascarella & Terenzini, 2005; Upcraft et al., 2005; Zeidenberg et al., 2007).

This action research study was interested in understanding the effectiveness of teaching success strategies in Rio Salado College's online college success courses (CPD 150 and CPD 115). The researcher began this study asking, "What are students' perceptions of their acquisition of college success strategies in Rio Salado's online college success courses?" In summation, before modifications to the course can be made, it is first important to know students' perceptions regarding their own study skills, time management techniques, and motivational strategies to better understand the effectiveness of teaching success strategies presented in these courses.

This chapter will first present a summary of the study and then discuss in detail the implications of the findings of this action research study. Next, it will explore future iterations of this action research study in the local community of practice; and finally, it will consider what the results might suggest about future community practice.

Summary of the Study

The purpose of this action research study was to determine the effectiveness of preparing students to be college-ready by examining motivation and learning skills in two online college success courses: CPD 150 (College Success, 3 credits) and CPD 115 (Success Strategies, 1 credit), at Rio Salado College, using the Motivated Strategies for Learning Questionnaire (MSLQ), which measures students' perceptions of their own college readiness, in a pre-

test/post-test format. Understanding students' perceptions of their own college-readiness is the college's first step in understanding the effectiveness of these courses. Clearly, understanding the impact of these success courses, as well as when and how to implement them (e.g., voluntary enrollment versus mandatory enrollment), is important. If students perceive that these courses effectively teach success strategies, degree-seeking students at Rio Salado College will start online classes with the requisite study skills, time management techniques, and motivational strategies. Moreover, if the college success course is effective with the small population who are enrolling *late* in a first year seminar course, the College and District can better determine the viability of mandating such a program in the first semester, as suggested by the research (CCSSE, 2010; Emmerson, 2009; Hanover Research Council, 2011; J. Jarret, personal communication, September 8, 2011; Kelso, 2009; O'Gara et al., 2009; Vosberg, 2006).

First, demographic data of the sample was presented. Then descriptive statistical analysis was used to compare the pre- and post-test scores to determine whether the average student scores regarding learning and motivation changed after completing the college success course. Finally, paired samples *t*-tests (or repeated-measures test) were conducted on 2 scales consisting of 13 subscales of the MSLQ. Overall the students reported that they had better study skills after the course than before it. Particularly, learning strategies, test anxiety, self-efficacy, effort regulation (self-management), control of learning beliefs, study skills, and time and study environment stand out as showing substantial improvement for the

students in the sample. The scales that were not significant, motivation, and the items under the rehearsal subscale, while implied outcomes of the course, are not explicit course competencies; so all of the competencies that could be met were met by a scale, subscale, or item. Course competencies that were not required for both courses were also not measured in this study. In addition, the course competency educational planning was not covered as part of the MSLQ and, therefore, was the only course competency shared by both courses that was not measured by this study.

Discussion and Implications of Descriptive Data

This section will discuss the findings of this action research study as well as the implications of these findings to the community of practice, which includes the counseling department responsible for overseeing the college success courses along with Rio Salado College.

Enrollment. The larger majority of the sample came from students enrolled in CPD 150 at a total of 70 students (77%); the remaining 21 students (23%) in the sample were enrolled in CPD 115. This is representative of the enrollment numbers for both courses from March 7th until September 12th, 2011, specifically, 348 (73%) enrolled in CPD 150 and 126 (27%) in CPD 115. It is possible students enroll in CPD 150 rather than in CPD 115 because they want to obtain three credits for CPD 150 instead of just one credit for CPD 115. Having three credits instead of one makes a student closer to half-or full-time status. Students might prefer to take three credits instead of one so they can qualify or receive a greater amount of financial aid. Advisors inform students about both

courses, but advisors encourage the three credit course if the student is undecided in a major since the three credit course has a career-exploration component and is useful for students in identifying a major.

The Vice President of Academic Affairs has a vision of offering the CPD 115 course free to help students become college ready (V. Smith, personal communication, September 15, 2010). If the college offered CPD 115 without cost to students, it would boost enrollment in the course, attract students to the college so potential students could try out a course, and provide them with an opportunity to get comfortable with the learning management system, *RioLearn*. It could be an effective marketing strategy. The free CPD 115 course could assist in preparing more students to be college ready, thus leading to better retention, persistence, and graduation rates (Downing, n.d.; Hanover Research Council, 2010; Jenkins & Bailey, 2009; McCabe, 1998; O'Gara et al., 2009; Zeidenberg et al., 2007). In the future this study could be extended to collect a larger sample of the CPD 115 students so course perceptions might be compared on a larger scale, thus determining whether the results remain the same or produce a larger effect size resulting in more confident actions as a result of the study.

Year in school. It was interesting to find that 45 participants indicated they were freshman and 46 indicated they were sophomores. One would assume that the course would be composed of almost all first semester students since the CPD courses are geared to prepare first semester students for success in college by helping students to navigate a college system and to increase self-awareness and personal effectiveness (Ellis, 2003; O'Gara et al., 2009; Pascarella &

Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006; Zeidenberg et al., 2007). Sophomores can definitely benefit from the college success courses, but the target audience for the courses is new-to-college students. Findings indicate students are enrolling *late* in Rio Salado College's first-year success courses. The high number of sophomores in the sample may be a result of the college's intervention strategy of requiring students to take the course if they had repeatedly failed math or biology. Many of students at the college register online without ever talking to someone at the college or attending an online orientation; students may register for any course that does not require a prerequisite or test placement score, according to the Director of Advisement of Rio Salado College (D. Hall, personal communication, December 1, 2011). Also, if a student does not talk to an academic advisor, one could potentially sign up for both courses since the course descriptions of CPD 115 and CPD 150 (set by the District Counseling Instructional Counsel) do not read exactly the same. Although a student could potentially take both courses at the same time, there was no evidence of this in the study's sample. If advising were mandatory for all degree seeking students, any confusion could be eliminated, and freshmen would learn about the course before actually selecting courses. The college currently has group advisement sessions where the college success courses are emphasized, but enrollment is low because group advisement is fairly new and this and personal advisement sessions are optional at this point (D. Hall, personal communication, December 1, 2011). Making advisement mandatory could help freshmen learn about the course. It might also proactively prevent students from failing math or biology, therefore

reducing the number of sophomores that take the course. Furthermore, if the course were mandatory this would minimize the number of students taking a success course late (as a sophomore) and also reduce the likelihood of students enrolling in both success courses. Another recommendation to control for students registering in two success courses at the same time would be to run a weekly registration report that would show any student who enrolled for both courses; then a representative from the college could call the student, advise them on which success course to take, and change their schedule to reflect one success course. It would be preferable to change the course requirements to prevent credit for both CPD115 and CPD 150, but this would be a curriculum change through the District Counseling Instructional Council and would involve all colleges approving this change. Future research could include comparing perceived skills of sophomores and freshmen to see if there was a significant difference.

Gender. Of the 91 students in the study, 71 (78%) were female and 20 (22%) were male. This differs somewhat from the distance population of Rio Salado College, where 68% of 43,093 distance learning students are female (Rio Salado College, 2011b); however, females were the majority for both the general distance Rio Salado College population and the sample. This finding may suggest that women are the majority of online learners at Rio Salado because online learning offers the flexibility to take classes that otherwise they might have been unable to take (Harrell & Bower, 2011; Nakos et al., 2002). Implications of this data could be further explored by the college. The college could do a survey to find out more about these women; the survey could ask students whether they are

single parents, working, or caring for children or the elderly. The college could also explore the needs of these online students and determine the services they need that are not currently being offered. A major question would be to find out whether these students (with the majority being women) would want to use childcare if available (Hall, 2009). Drop-off childcare could be available when students have to take test or use the computer labs at one of the many Rio Salado testing centers across Maricopa County. The college could research licensure costs and open a childcare center or partner with several sister colleges and get permission for Rio Salado College to use the childcare facilities.

Literature suggests that online females have lower confidence levels than men; they have lower overall confidence in the educational environment (Blum, 1999; Clingingsmith, 1993; Gallos 1992) and females have lower confidence in computer skills **(**Felder, Felder, Mauney, Hamrin, & Dietz,, 1995; Mark, 1993). According to Blum's 1999 study, online results supported Belenky, Clinchy, Goldberger, and Tarule's 1986 model of the male separate learner and the female connected learner, indicating that unlike traditional higher education, the distance education learning environment is flexible enough for gender-specific learning styles. Faculty need to be aware of motivational and learning style differences between genders (Blum, 1999). While teaching and updating college success courses, it is important to account for gender-specific learning and motivational styles. It is also critical that all courses at the college keep in mind gender differences in learning and motivational styles.

Hours worked. Additional findings agree with the online learning literature that suggests the convenience and flexibility of online courses are very attractive to students (Harrell & Bower, 2011; Nakos et al., 2002). Of the non-working students, 78% of the sample are female (except one student under 19) and also fall into child bearing/raising-age categories (20–49). Almost half (46%) of students in the sample indicated they work forty hours or more. This is a sizable number considering 25% of the entire sample indicated they were full time students (4 classes or more). Therefore, 11% of the entire sample were working full time as well as attending school full time (4 classes or more). Fifteen percent of the entire sample stated that they worked at least 30 hours or more a week and took 4 classes or more. Thirty-four percent of the entire sample indicated that they worked 30 hours or more and took 3 or more classes.

The majority of distance learners at community colleges today are much like non-traditional students (Welsh, 2007). According to Cross (1980), a non-traditional student is defined as an adult who returns to school full or part time while maintaining responsibilities such as employment, family, and other responsibilities of adult life. Non-traditional students are more at risk than traditional college students (Welsh, 2007). Non-traditional online learners are possibly a large percentage of the distance learners at Rio Salado College. The college might consider doing further research to see whether the sample is representative of the college population. Determining the amount of hours students worked could be accomplished through a mandatory electronic survey

asking students how many hours they worked; they could not register or access their classes without completing the survey.

Although the MSLQ did not ask participants whether they had dependents to care for, this also is a common scenario with online learners (Welsh, 2007).The self-induced pressure to graduate in two years combined with working full time and taking care of a family could also impair or delay student success. Students may take too many classes and fail versus taking one or two courses at a time and passing. Students may also be motivated by financial aid to be a full time student so they are eligible for the maximum amount of Pell grants (free money offered to students who qualify from the federal government) and also student loan awards, especially since this study was completed during a time of economic downturn in the U.S. (Welsh, 2007).

The data from the survey regarding course load and hours worked compared with data of students not working indicates that students who attend online community college have many obligations (work, caring for dependents) outside of the classroom and that is why teaching time management strategies is important to online students' success (Cross 1980; Welsh, 2007). This data point is consistent with recent literature regarding community college students that suggests students have many obligations outside of the classroom, which is a shift from the traditional college student population (CCCSE, 2008; Moltz, 2009; Rizer, 2005; Schuetz, 2007; Tuttle, McKinney, & Rago, 2005). Students may be setting themselves up for failure if they are working over 40 hours a week, taking more than four classes, and concurrently caring for others. Online students need to

know before classes even start how to manage their time (Bell, 2006; Kelso, 2009; Lorenzo, 2011; McGhee, 2010). In Rio Salado's college success courses, students must plan out their weekly schedule to include all of their activities and then their instructor provides feedback on this assignment. Findings of this action research show that some students are taking on too much before they start their course; time management/planning activities need to be done before students register so that they start out on the right foot (college readiness skills: time management). An orientation before registering would help with time management skills and prepare the student for the demands of online college courses (Cohen & Brawer, 2008; Pascarella & Terenzini, 2005; Tinto, 1993; Upcraft et al., 2005). Rio Salado College is developing an orientation that new-to-college degree seeking students will be encouraged to take.

Reasons for taking this class. Almost all of the participants (96%) agreed that the CPD course would be useful to them in other courses and would help them improve their academic skills (96%). A large number of the sample thought that the content seemed interesting (82%), and that the course would improve their career prospects (79%). The finding that 96% of the students in the sample agreed that this course would help them in their future courses and would help them improve their academic skills validates the importance of this action research study in analyzing the effectiveness of preparing students to be college ready by examining motivation and learning skills in two online college success courses. Some students indicated that this course was required; 24% thought all students were required to take this course, even though this course is an elective.

Speculations for this outcome may be that students think it should be required, or perhaps they had already failed math or biology and thus were actually required to take the course as an intervention. The researcher estimates that only three and a half percent (approximately 16 students out of 474) of the students enrolled in both courses were part of the math/biology intervention. Therefore, the majority of the students who answered the question assumed it was mandatory when in fact it was not.

This study's findings along with the literature support making a college success course mandatory for new degree-seeking students at Rio Salado College. Making this course mandatory would align with the district philosophy and help the college to participate in the District's *I Start Smart* program. One argument that opposes a mandatory success course is that students will oppose the course if it is required. Findings of this action research dispute this claim since large numbers of the sample agreed that the CPD course would be useful to them in other courses, that the content seemed interesting, that the course would improve their career prospects, and that they *already* believe the course to be mandatory.

Discussion and Implications of Changes between Pre- and Post-Test

The purpose of this action research study was to determine the effectiveness of preparing students to be college ready by examining motivation and learning skills in two online college success courses through the analysis of paired samples *t*-tests (or repeated–measures test) for each scale (motivation and learning strategies) and corresponding subscale (motivation: intrinsic goal, extrinsic goal, task value, control of learning beliefs, self-efficacy for learning,

test anxiety; and learning strategies: rehearsal, elaboration, organization, critical thinking, metacognitive self-regulation, time and study environment, effort regulation). The *t*-tests measured for any significant differences between the pre- and post-test scores (Creswell, 2009; Pearson, 2010). Results were evaluated against a *p* value that is less than .05 to identify statistically significant differences (Pearson, 2010).

Scales. The scales of the MSLQ can be divided into two broad categories: motivation and learning scales (see Appendix D). The motivation scale consists of 31 items that assess students' goals and value beliefs for a course, their beliefs about their skill to succeed in a course, and their anxiety about tests (Pintrich et al., 1991). The learning strategies scale includes items regarding students' use of different cognitive and metacognitive strategies. In addition, the learning strategies scale includes 19 items concerning student management of different resources (Pintrich et al., 1991). Results showed that the scores on the learning scale were statistically significant [t (2253) = 4.407, $p < .05$], but the scores on the motivation scale were not statistically significant (see Appendix H). When combining both scales, results were statistically significant [t (3725) = 4.696, $p < .05$], with an effect size of $r^2 = 0.0059$. Overall results were significant, but very small. Results were evaluated against a *p* value that is less than .05 to identify statistically significant differences (Pearson, 2010). While the motivational scale was not significant when many of the subscales and items under the motivational scale were significant, all but the self efficacy for learning and performance effect sizes were very small which might explain the lack of significance for the

motivational scale (Pearson, 2010). In addition, the courses are not expected to change motivation. Motivation is not a competency. The courses are expected to impact students' learning. That is why the learning scale is significant and the motivation scale is not. The significant subscale and items under motivation are an unexpected benefit of the courses that impacted a few elements of motivation. Since motivation is not a goal of the course (i.e. course competency), the motivation scale was not expected to be significant. The fact that overall there was statistical significance with the MSLQ pre-test/post-test scores suggests that online college success courses at Rio Salado College are effective based on student perceptions of those in the sample for this action research. This information aligns with existing research that college success/first-year success courses are effective in helping students prepare to become successful college students (El Khawas, 1995; Ellis, 2003; Estevez, 2005; Hanover Research Council, 2011; J. Jarret, personal communication, September 8, 2011; Lingo, 2009; O'Gara et al., 2009; Pascarella & Terenzini, 2005; Upcraft et al., 2005; Zeidenberg et al., 2007).

The learning scale was also statistically significant [t (2253) = 4.407, $p < .05$]. This finding implies that students are learning the study skills presented throughout the courses that align with the subscales under the learning scale (rehearsal, elaboration, organization, critical thinking, self-regulation, time and study environment, and effort regulation). This means that students noticed that they learned basic rehearsal strategies involving naming or reciting from a list to be learned (Pintrich et al., 1990). Students indicated they learned to store

information into long term memory by paraphrasing, summarizing, creating, analogies, and generative note taking. Students also perceived they learned organization strategies such as clustering, outlining, and selecting main ideas. Critical-thinking skills such as problem solving, decision making, and critical evaluations were noted to be learned along with self-regulation skills that assist learners in checking and correcting their behavior as they proceed on task. Students recognized that they learned time management skills that involved scheduling, planning, and managing one's study time along with utilizing an organized, quiet, and calm environment. Finally, students interpreted that they learned effort management skills that signify goal commitment, but also regulate the continued use of learning strategies (Pintrich et al., 1990).

These findings imply that students perceived they learned several study skills, time management skills, critical-thinking skills, and effort management skills that signify goal commitment meeting several course competencies (see Figure 1).

Figure 1. Competencies met

Identify and apply time-management strategies.
Identify and apply goal-setting strategies.
Identify preferred learning style and describe its relationship to teaching and learning strategies.
Identify and utilize interpersonal communication skills.
Identify and utilize strategies to organize study materials.
Identify and utilize note-taking strategies.
Identify and utilize textbook, academic, and classroom strategies.
Identify and utilize test-taking strategies.
Identify and utilize strategies to improve memory.
Identify and utilize strategies for critical and creative thinking.

These findings also align with the literature that has shown that first-year success courses teach students fundamental strategies for achievement, such as how to write notes, take tests, and manage their time; they also explore particular learning styles and emphasize goal setting for college and careers (Ellis, 2003; O'Gara et al., 2009; Pascarella & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006 ; Zeidenberg et al., 2007). Such courses are designed to help students navigate a college system and to increase self-awareness and personal effectiveness (Ellis, 2003; O'Gara et al., 2009; Pascarella & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006; Zeidenberg et al., 2007). Research has uncovered multiple

benefits for students who have completed success courses (Downing, n.d.; Hanover Research Council, 2010; Jenkins & Bailey, 2009; McCabe, 1998; O'Gara et al., 2009; Zeidenberg et al., 2007). The benefits include higher graduation rates and a reduction in dropouts; when classes are mandatory for all freshmen, improved retention and increased persistence rates range from 8 to 30 percent. Students have higher GPAs than those who did not take the course (Downing, n.d.; Hanover Research Council, 2010; Jenkins & Bailey, 2009; McCabe, 1998; O'Gara et al., 2009; Zeidenberg et al., 2007). Therefore, these findings also support making this course mandatory for new degree seeking students to prepare them to be college ready and learn the study skills they will need to apply to their future coursework.

Learning strategies subscales. Under the learning strategies scale, the elaboration, metacognitive self-regulation, and time and study environment subscales showed a mean difference change, but very small since all effect sizes (r^2) of the scales were under .04 (see Appendix H). Further studies would need to be conducted with an increased sample size to see whether the mean difference changed and effect size increased. An increase in sample size would help to eliminate sampling errors if any occurred and strengthen the effect size (Ferguson, 2009). Also modifications and enhancements could be applied to the course lesson dealing with elaboration, metacognitive self -regulation, and time and study environment. Thus, lessons could put more emphasis on these areas. Findings indicate students are learning these skills because there was a mean difference change with each scale, but effect sizes were too small to be actionable

(Ferguson, 2009, see Appendix H). Students may need to spend more time on elaboration, metacognitive self-regulation, and time and study environment to strengthen the effect sizes of these scales. At the end of each lesson, lesson objectives questions could be asked to see whether students were actually learning elaboration, self-regulation, and time and study environment techniques.

The effort regulation subscale under the learning strategies scale was also statistically significant, focusing on students' ability to control their effort and attention, in other words self- management in the face of distractions and uninteresting tasks. The mean difference for the effort regulation subscale was 0.429. This change was significant, accounting for 4.2% of the variance between the pre- and post-tests, [t (251) = 3.082, $p < .05$, $r^2 = 0.04$]. Effort management is important to academic success because it not only signifies goal commitment, but also regulates the continued use of learning strategies (Pintrich et al., 1991). A significant change in this scale indicates students are learning self-management and committing to a goal by using the new learning strategies taught in the CPD courses. Self-management is very important for online students to possess (Bell, 2006; Kelso, 2009; Lorenzo, 2011; McGhee, 2010). Both courses concentrate on an entire lesson related to self-management entitled *Mastering Self-Management*. In this lesson, one objective is to develop strategies to support self-discipline to persist in the face of challenges and to use time wisely. This objective reflects the types of questions of this MSLQ subscale that focus on commitment to finishing this course, even if students perceive the course to be difficult, dull, or boring (Appendices D and H). Implications of this finding suggest that the MSQL is

measuring self-management, which also supports making this course mandatory because students are showing that they have goal commitment and are regulating the continued use of learning strategies. This data means students are not only learning how to learn but they are continuing to use these skills. Mandating this course would help increase students' knowledge and use of self-management (which includes goal setting and commitment) which would increase their chances of academic success. Current research emphasizes that setting, elaborating, and reflecting on personal goals improve academic performance (Elliot & Harackiewicz, 1994; McCoach & Siegle, 2003; Morisana, Hirsh, Peterson, Pihl, & Shore, 2010; Russell & Phelps, 2009). Goal setting is a vital skill that can improve a student's grade point average (GPA). All college students need goal setting skills so they can work toward a personal goal of obtaining a certificate/degree that opens doors to career goals; expanding access to the college success courses would help increase goal setting, and therefore increase GPA and certificate/degree completion.

On the rehearsal subscale, no significance was found. It may be assumed that verbal learners are less likely to take online courses and do not use verbal study techniques (Harrell & Bower, 2011). For example, item 39 asked *When I study for this class, I practice saying the material to myself over and over*. Since college success courses do not have exams, students may not feel the need to practice repeating material over and over, and since they are online, they may be less likely to use verbal study techniques (Harrell & Bower, 2011). To incorporate verbal study techniques, students could have the option of recording videos for

some of their assignments and complete them as oral presentation. Currently the course has to go outside of the learning management system (*RioLearn*). In the future version of *RioLearn* these video and audio recordings will be easier for students to create and submit for credit. The counseling faculty along with the entire Rio Salado College faculty has been strongly encouraging more interactivity (including audio and visual aspects for assignments) throughout courses.

Learning strategies items. Question 57, under the metacognitive self-regulation subscale, was a reversed item in which one would want to see responses go down between the pre- and post-tests. In fact, scores did go down significantly regarding understanding the readings for the course. Item 57: *I often find that I have been reading for this class but don't know what it was all about*, was significant with a mean difference of 1.109 [t (45) = 2.920, $p < .05$, $r^2 = 0.160$]. This finding suggests that students perceived an increased ability in how to read the textbook at the end of the college-readiness curriculum (i.e. after the post-test) and may be linked to specific assignments within the curriculum pertaining to how to read a textbook called "reading logs." Students are required to submit two assignments that outline the chapter and highlight important information in the chapter by creating study questions. Students are also encouraged to outline all of their assigned readings, but the rest of the outlines are not graded. The competency of learning to read a college textbook will help students learn how to read a textbook or article in their future courses thus, increasing their chances of obtaining passing grades

and even contributing to students' meeting their educational goals, including graduation. Findings indicate that students perceived they gained self-management skills that can empower them to be successful learners, and these findings support mandating the course.

Responses to Item 65: *I have a regular place set aside for studying*, under the time and study environment subscale of the learning strategies scale increased, with a mean difference of 0.739 [t (45) = 2.028, $p < .05$, $r^2 = .080$]. Item 65 showed that students value setting aside study space since taking the success course which is emphasized in both courses through an assignment that asks students to develop a study plan and reflect on an ideal study environment in their journal entries. Findings indicate this assignment is realizing the intended outcomes; students perceived that they have learned the importance of a regular place set aside for studying after completing the success course. Discovering these findings supports the need to mandate the course at Rio Salado College because it shows students are valuing the importance of setting aside a regular quiet place for studying, which contributes to better chances of success (Pintrich et al., 1991). Study environments matter, and students need to learn what environments are best for their learning style (Counseling Services, 2012; Ellis, 2003; Jungert & Rosander, 2009; Keeley, 1997). Expanding access to the course will teach more students not only how to study, but also where to study, which will contribute to their student success (CCSSE, 2010; Emmerson, 2009; Hanover Research Council, 2011; J. Jarret, personal communication, September 8, 2011; Kelso, 2009; O'Gara et al., 2009; Vosberg, 2006).

The last item, Question 81: *I try to apply ideas from course readings in other class activities such as lecture and discussion*, also showed statistical significance. Item 81 was part of the elaboration subscale and had a mean difference of 0.783 ($t(45) = 2.121$, $p < .05$, $r^2 = 0.090$). This significant difference shows that students perceive that the skills learned in this course are transferable to other activities. It is unclear if a specific assignment contributed to the significance of this question, but one can infer that students are relating their course readings to other class activities after completing seven weeks of the college success courses. Students, therefore, understand how to relate all of their material to general ideas of the course. Students perceive understanding of the textbook, course materials, and video presentations, as well as how each relates to the other. Therefore, students perceived that the course was effective in relation to all its material; students understood the flow of the course. Students learned how to read a text, take notes, synthesize all of the course material, and relate all of the material to the main objectives of the course. In summary, students understood learning strategies and how to apply these strategies (Ellis, 2003; O'Gara et al., 2009; Pascarella, & Terenzini, 2005; Upcraft et al., 2005; Vosberg, 2006; Zeidenberg et al., 2007). This finding along with the other findings, in this action research study and current literature supports mandating this course for new degree seeking students at Rio Salado College (CCSSE, 2010; Emmerson, 2009; Hanover Research Council, 2011; J. Jarret, personal communication, September 8, 2011; Kelso, 2009; O'Gara et al.,

2009; Vosberg, 2006). The more students that are introduced to learning strategies, the more students will be able to navigate their coursework.

Motivation subscales. Under the motivation scale, the intrinsic goal, control of learning beliefs, and test anxiety subscales showed a mean difference change, but very small effect sizes (r^2) as the scales were under .04 (see Appendix H). Future studies with a larger sample size might help increase these effect sizes or determine if these effect sizes remain small.

Goal setting is a course competency of both college success courses that was measured by the intrinsic and extrinsic goal orientation subscale under the motivational scale. Two lessons in both courses address goal setting; these lessons are discovering self-motivation and mastering self-management. One of the objectives of the self-motivation lesson is to design a life plan of goals, dreams, and personal roles based on internal motivation. Two of the objectives in mastering self-management deal directly with goal setting. Students are to choose, prioritize, and schedule purposeful actions that will move them toward their goals and dreams and use written tools of self-management (monthly planners, next actions lists, 32-day commitment, and tracking forms) to get and stay on course. After examining the goal setting questions subscale questions for intrinsic and extrinsic goal orientation, the MSLQ does not ask any questions related to goal setting, only questions about course content and grades. These do not really address the course competency of goal setting in the college success courses. After the results were analysized, it was found that the MSLQ questions that were

asked and how the content was presented in the course do not align as well as anticipated when the study was designed.

The college success courses focus on goal setting; students are encouraged how to make micro goals (daily goals), short term goals, and long term goals, whereas the MSLQ focuses on goal orientation. There were no questions under the motivational scale, intrinsic goal subscale on MSLQ that addressed goal setting itself because the tool states goal orientation means the degree to which the student perceives him or herself to be participating in a task for reasons such as challenge, curiosity, or mastery (Pintrich et al., 1991). An implication of this finding is that for this particular course learning outcome, the MSLQ did not measure goal setting in the way it is presented in the course. However, goal setting is addressed under the effort regulation subscale of the learning scale, which is discussed earlier in the chapter.

The self-efficacy for learning and performance subscale under the motivation scale was significant with a mean difference of .299. This change was significant, accounting for 4.8% of the variance between the pre- and post-tests ($t(367) = 4.298$, $p < .05$, $r^2 = 0.48$). Self-efficacy for learning and performance had the highest percentage of variance of any scale, subscale, or question. It is assumed that self-efficacy had the highest statistical significance of all the results because it is emphasized throughout the courses. It is embedded in every lesson. Although it is not a course competency, it leads to achievement of all of the course competencies and is the foundation of all counseling courses at Rio Salado College. Self-efficacy empowers students to believe in their capabilities to master

academic activities, affects their aspirations, heightens their level of interest in academic activities, and encourages academic accomplishments (Bandura, 1994). An increase in self-efficacy is important because these CPD courses work on empowering students and transforming them from a victim mentality to a creator mentality (Downing, 2010). These results suggest this concept is working. Students' perception is a valid predictor of success because it is directly correlated to perceived self-efficacy.

No significance was found for the extrinsic goal subscale. This is actually a positive outcome for the study. When one has high extrinsic goal orientation, engaging in a learning task is a means to an end. The main concern the student has is related to issues that are not directly related to participating in the course itself (such as grades, reward, comparing one's performance to that of others, Pintrich et al., 1991). Therefore, students who took the survey were not motivated by points or grades, suggesting they might be more motivated by a commitment to learning for its own sake. The college success courses focus on teaching students that most effective learners are empowered learners who possess self-responsibility, self-motivation, self-management, interdependence, self-awareness, life-long learning, emotional intelligence, and high self-esteem (Downing, n.d.). Findings imply that students are learning skills to be effective learners in the course, and students are not extrinsically motivated.

Motivation items. Mean differences were also found significant for individual questions under the motivation scale. For example, test anxiety subscale, Items 3 and 8 were found to be statistically significant. Item 3 asks:

*When I take a test I think about how poorly I am doing compared with other student*s. (Pintrich et al., 1991). The mean difference for item 3 was -0.739 although the effect size was small [t (45) = -2.813, $p < .05$, $r^2 = 0.150$]. Question 8 which asks: *When I take a test I think about the items on other parts of the test I can't answer*, had a mean difference of -0.804, which also shows a significant reduction in test anxiety [t (45) = -2.407, $p < .05$, $r^2 = 0.110$]. Combined, these reductions suggest that upon finishing the class, students perceive having less anxiety about tests and therefore are better equipped to do well. On one of the first assignments, students are directed to create a study plan. Study tip video clips are strategically placed throughout the course along with specific lessons that target different study strategies. There is also a short video on how to reduce test anxiety. Research shows that if students are prepared for tests by studying, their text anxiety will be reduced (Counseling Services, 2011; Huberty, 2009; Wilkinson, 1990; Wittmaier, 1972). Based on this action research study's finding, the course is preparing students to do well on tests and their coursework. The finding indicates the short targeted videos are effective and the counseling department might want to incorporate more videos like these within the course curriculum to meet other competencies that were not significant.

Under the control of learning beliefs subscale, two items were found to be statistically significant. Item15: *I'm confident I can understand the most complex material presented by the instructor in this course*, had a mean difference of 0.609 [t (45) = 2.872, $p < .05$, $r^2 = 0.150$] indicating an increase in student confidence.

Item 25: *If I don't understand the course material, it is because I didn't try hard enough*, was significant with a mean difference of 0.783 [t (45) = 2.558, $p < .05$, $r^2 = 0.130$]. Items 15 and 25 combined suggest that students perceive that they are gaining focus and confidence in understanding course material. This finding implies that students are learning study skills and gaining self-confidence. Significance in this scale could also be related to how the emphasis of the entire course is empowerment/self-efficacy. Self-efficacy is evident throughout the college success course at Rio Salado College that integrate the *On Course* philosophy in every lesson throughout the course, teaching students that most effective learners are empowered learners, who possess self-responsibility, self-motivation, self-management, interdependence, self-awareness, life-long learning, emotional intelligence, and high self-esteem (Downing, n.d.). Evidence of this study proposes that the courses can empower learners and should be made mandatory by the college to prepare students to be college ready, and therefore, increase student success. Current literature along with an increase in self-efficacy and students' new knowledge and application of learning skills in this action research study support mandating this course for new degree seeking students at Rio Salado College (CCSSE, 2010; Emmerson, 2009; Hanover Research Council, 2011; J. Jarret, personal communication, September 8, 2011; Kelso, 2009; O'Gara et al., 2009; Vosberg, 2006). Making the course mandatory would expand access to the course so that more students would be given the opportunity to learn study skills, self-confidence, self-responsibility,

self-motivation, self-management, interdependence, self-awareness, and emotional intelligence (Downing, n.d.).

Recommendations

As a higher education leader and counselor, I focus on what is best for students. I want to see students succeed and want to help students overcome their personal roadblocks to achieving success. Clearing the road to education by removing unnecessary potholes, dips, curves, and roadblocks by the system is my goal. I often am impatient with institutional roadblocks, but so is Rio Salado College. Working at Rio Salado College for over six years, I have found a place to work with my shared mission of access, choice, flexibility, and student success (Rio Salado College, 2011b) as well as a willingness to try new things in meeting those shared objectives.

Rio Salado College is not the norm. Change happens quickly compared to most institutions (C. Bustamante, personal communication, September 8, 2011; Christenson & Erying, 2011; J. Jarret, personal communication, September 8, 2011; Lumina Foundation, 2011). The college fosters innovation and success (Christenson & Erying, 2011; Lumina Foundation, 2011). Because it uses disruptive innovation, sometimes rules and regulation by other sources such as state and local government, can delay the speed of innovation (Christenson & Erying, 2011). Time and money have to be devoted to new or changing federal regulations of online learning. Every week has the potential of changing policies in compliance with federal regulation of online learning. Rio Salado College is very different from most colleges, even from its sister colleges. Being different is

not always easy, being the one exception out of a ten college district is not always popular, but it is our reality. National recognition of Rio Salado College often encourages competition and exclusion by the other nine colleges. The following recommendations for research and practice are intended to help students overcome their personal roadblocks to achieving success. I want to clear the road to education, make the system easier to navigate, and foster student success at Rio Salado College, an institution willing to change and adapt to meet the need for an increase in student success.

Recommendations for future research. Findings of this action research study have been discussed along with implications for the community of practice, specifically the counseling department of Rio Salado College and the broader Rio Salado College.

Overall the students reported that they had better study skills after the course than before it. Particularly, learning strategies, test anxiety, self-efficacy, effort regulation (self-management), control of learning beliefs, study skills, and time and study environment stand out as showing substantial improvement for the students in the sample. These findings validate that students perceive the course is effective in helping them become college-ready. Measuring students' perceptions of acquisition of student skills through these courses by those who take it as an elective was the first step in testing the hypothesis to determine the effectiveness of preparing students to be college-ready by examining motivation and learning skills in Rio Salado College's online college success courses. Understanding the effectiveness of the courses allows me, as counseling faculty chair, to strategically

plan for expanding the access to these courses and correspondingly influencing student success and completion rates at the college.

The first step has been answered since students perceive the course is effective in helping them become college-ready. In addition, the next step is to expand future research and to identify a specific tool or modify existing tools measuring college success to make sure *online learning* within college readiness curriculum is addressed. Both courses have a lesson called *Becoming an Excellent Online Learner,* a lesson uniquely designed for Rio Salado students. Moreover, this is not a course competency since this course is curriculum shared by all Maricopa Community Colleges which are mostly campus-based institutions (although some colleges offer online college success courses), but online college readiness needs to be assessed, particularly within the context of Rio Salado's success courses. Online students must possess specific abilities and skills that include self-motivation, time-management, and technology proficiency (Bell, 2006; Kelso, 2009; Lorenzo, 2011; McGhee, 2010). Technology proficiency was not addressed in this action research study, but should be included in future studies to make sure students are ready to start college online having basic computer knowledge and access to a computer and reliable internet.

Several important questions for online learners in the demographic questions section were not part of the tool since the tool has not been updated since 1991 (before most online courses existed). The MSLQ did not ask students if they had their own computer, internet connection, and transportation (for in person tests). Access to technology is key for online student success (Bell, 2006;

Kelso, 2009; Lorenzo, 2011; McGhee, 2010; Palloff & Pratt, 2003). Rio Salado assumes students have reliable computers, internet connection, and transportation to get to a computer lab or testing center. Rio Salado College does not provide childcare while testing so this presents an obstacle for those who do not have reliable childcare (Hall, 2009). The college is exploring childcare options for future satellite locations (J. Jorgenson, personal communication, December 8, 2011). If this study were to be conducted again in the future, questions relevant to online learning would need to be asked such as: Do you have your own computer with reliable internet? If not, do you have reliable transportation to access a Rio Salado computer lab, public library, or location with computers and reliable internet connection? If you have dependents, do you have reliable childcare or elderly care when you need to take a test in a computer lab or travel to a computer lab to complete an assignment?

Overall the MSLQ effectiveness did not meet expectations of measuring the college success course competencies. The tool was not aligned as closely with the competencies as initially thought before the study began. For future studies, new tools that might provide more relevant assessment of today's college student need to be considered. Online learner surveys should be explored. Currently, the College Success Factor Index (CSFI 2.0) is being considered in place of the MSLQ in both courses in order to continue assessment of the courses. CSFI 2.0 was developed by Dr. Edmond Hallberg, who has an extensive background in stress research, assessment, and management, and Kaylene Hallberg, M.S., Dean of Counseling at Sierra College (Cengage Learning, 2010). This tool measures

and promotes student success. It is similar to the MSQL but more geared toward today's learner and the college success courses versus the MSLQ which was geared toward any college course and learners of the 1990s. This tool was not one of those considered when this action research study began. After this action research study, the CSFI 2.0 was better understood and more highly valued, and the price became a non-issue (free) after adoption of an low cost eBook (online text), authored by Skip Downing, was established.

CSFI 2.0 has 100 questions that can be used in a pre-test/post-test format. It has ten key areas linked to college success (responsibility/control, competition, task planning, expectations, family involvement, college involvement, time management, wellness, precision, and persistence; Cengage Learning, 2010). It has been normed with 125,000 students representing research universities, state universities, community colleges, and private colleges. The CSFI 2.0 has also been tested for reliability and validity. Concurrent validity studies with a variety of students indicate coefficients from -.30 to -.50, desirable results for self-reporting instruments comparable with MSLQ results (Cengage Learning, 2010; Pintrich et al., 1991).

The MSLQ was the best tool out of six tools examined when the study began. The MSLQ met the most competencies and was the most affordable of all of the tools at the time. CSFI 2.0 is close to the MSQL, but is more adaptable for online students and has reports faculty can run to measure data over the semester and over years. Students also get instant feedback to help determine their strengths and areas in which they need improvement. It also provides a text

specific remediation that guides students to appropriate pages in the eBook for added support. Another benefit of CSFI2.0 is that it can be modified; parts of it can be taken out and other parts (such as online learning questions) can be added.

Along with a new assessment measure, future studies could be conducted if a college success course becomes mandatory for new degree seeking students. Then results could be compared to a control group that did not complete a college success course. Students could be tracked to which group had higher retention rates (successful course completion), higher successful persistence (semester to semester completion), higher grade point averages, and higher graduation rates. This research structure could not be implemented for this study because the college success courses enrollment was low to begin with (enrollment is increasing slowly every year). Also these courses were so new and students who had taken CPD 150 would not have graduated yet. In the year 2013-2014, this study could be conducted to see if students who had taken a college success course versus students who had not and intended on graduating. The value of doing this study would be to see if the college success course had an effect on course completion, persistence, grade point averages, and graduation rates. If it had a positive effect, it would support this study's findings, and help students achieve a college degree. Results could be used to encourage more students to take the course.

Findings of this study indicated the Rio Salado college success courses were effective in preparing students to be college ready. To strengthen these results, the counseling department could drill down to each course competency

and ask students for feedback using qualitative methods. This may help strengthen results and target areas or reinforce areas that this action research study indicated needed improvement, such as some subscales under the motivation scale (which contributed to the non-significance of the scale).

Finally the counseling department could ask students what students would want to see in the course to make it better or more interesting from their perspective. Qualitative methods could ask students what they liked about the course and what they thought was missing. Results would be analyzed and findings could help to improve the course. Improvements to the course will also be made when the new version of the learning management system (*RioLearn Version 8*) is developed in the next year to year and a half (2012-2013). Students will be able to click a thumbs up sign if they like a lesson or assignment. More feedback and interactivity will be available to enhance this course as well as any other course using RioLearn.

Recommendations for practice. Having completed this action research, I now have the responsibility of sharing my findings and recommendations with my community of practice, as this information has the potential to contribute to retention, persistence, and graduation completion rates.

Overall the students reported that they had better study skills after the course than before it. Particularly, learning strategies, test anxiety, self-efficacy, effort regulation (self-management), control of learning beliefs, study skills, and time and study environment stand out as showing substantial improvement for the

students in the sample. These findings validate that students perceive the course is effective in helping them become college-ready. The institution should value this course as well and make it mandatory to students who seek a degree at Rio Salado College.

As a researcher and department chair of the Rio Salado Counseling department, I believe online college success courses will be even more effective in influencing the college's completion rates if they are mandatory at Rio Salado just as they are at the other colleges in the Maricopa District. Measuring students' perceptions of acquisition of student skills through these courses by those who take it as an elective was the first step in testing this hypothesis. The next step is to expand access to new students who register at Rio Salado College.

To foster a "One Maricopa" (Office of the Chancellor, n.d.) attitude and increase student success at Rio Salado College and the District, it is my recommendation that Rio Salado also follow the system wide program called *I Start Smart*, to help students get started on the right track; this program includes mandatory orientation to college, mandatory advisement, mandatory assessment in English, math, and reading, and proper placement in courses. The program also requires that students who place into at least one developmental education course complete a college success course (either CPD 115 or CPD 150). I would propose taking it even a step, beyond the *I Start Smart* requirements and expanding the requirement of a college success course to include all new students who are seeking a degree with Rio Salado. As our college plans strategic goals for the upcoming years, I am a tri-chair, one of the three people who leads a team to

create future college plans to increase retention and graduation rates under one of Rio Salado's strategic planning goals, student success. My dissertation research will help the college plan completion goals (such as implementation of mandatory advisement, mandatory placement, mandatory orientation, and mandatory college success courses). I want to share my final results with the executive team of the college and the college success committee. The college success tri-chairs have been working on the whole array of placement, orientation, advisement, and college success course. The committee is talking with departments regarding innovative techniques that can be implemented towards the goal of student success. Recently at our yearly college wide meeting Josh Jarret, Deputy Director of the Gates Foundation, came to speak to the entire college about how our work is aligned with the national agenda and how Rio Salado College is one of 50 institutions out of 4,000 that can lead education into the future to educate the masses (J. Jarret, personal communication, September 8, 2011). Rio Salado College is one of the few institutions that are scalable (can grow massively due to low operational costs with a one course many section replicable model; Christenson & Erying, 2011; J. Jarret, personal communication, September 8, 2011; Lumina Foundation, 2011).

Conclusion

This study has prepared me to become a college leader and a faculty leader. I now have a clearer understanding of data and how data can affect decision making and change. I have applied my research to my everyday work, which has made me a better action researcher. I will take what I have learned

from this study and make improvements in my course. I am examining strategies that better measure what students are learning in the courses I oversee. I am conducting several assessment strategies that go along with Rio Salado college-wide assessments such as critical thinking, writing, sustainability, and information literacy.

Community colleges are increasingly relying on data and becoming a culture of evidence to make informed institutional decisions (McKinney, 2011). Because of my education at Arizona State University, I am a better researcher and interpreter of data. I can combine qualitative and quantitative data to explore new innovations and adapt innovations based on solid data that I can interpret. I am more confident in my skills and have a new appreciation for data and. I can set goals, monitor progress, and improve practice. I am now more equipped to be a transformational leader in higher education in the years to come.

References

Addis, A. (2009). *A comparison of face-to-face and online learning environments to prepare teachers to use technology* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT No. 1469541)

Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning.* Needham, MA: Sloan-C. Retrieved December 15, 2010, from http://www.sloan-c.org/publications/survey/onlinenation

Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States, 2011*. Needham, MA: Sloan-C. Retrieved December 15, 2010, fromhttp://www.onlinelearningsurvey.com/reports/goingthedistance.pdf

American Association of Community Colleges (AACC). (2009). *Fast facts* (Data File). Retrieved from http://www.aacc.nche.edu/AboutCC/Pages/fastfacts.aspx

American Association of Community Colleges (AACC). (2010). *National organizations sign student completion call to action*. Retrieved from http://www.aacc.nche.edu/newsevents/News/articles/Pages/042020101.aspx

Anderson. L. (2011, January 18). 'Academically Adrift' *book release in DC—Controversial book explains truth about what undergraduates currently learn in college.* Indianapolis, IN: Lumina Foundation. Retrieved from http://www.luminafoundation.org/newsroom/news_releases/2011-01-18.html#

Astin, A. (1977). *Preventing students from dropping out*. San Francisco, CA: Jossey-Bass.

Auguste, B.G., Cota, A., Jayaram, K., & Laboissiere. M. C. (2010, November). *Winning by degrees: The strategies of highly productive higher education institutions*. New York, NY: McKinsey and Company. Retrieved from http://mckinseyonsociety.com/downloads/reports/Education/Winning%20by%20degrees%20report%20fullreport%20v5.pdf

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York, NY: Academic Press

Barefoot, B. O. (1993). *Exploring the evidence: Reporting outcomes of freshman seminars (Monograph No.11*). Columbia, SC: University of South Carolina, National Resource Center for the First Year Experience.

Belenky, M.F., Clinchy, B.M., Goldberger, N.R., & Tarule, J.M. (1986). *Women's ways of knowing: The development of self, voice, and mind.* New York, NY: Basic Books.

Bell, P.D. (2006) *Can factors related to self-regulated learning and epistemological beliefs predict learning achievement in undergraduate asynchronous web-based courses?* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (MSTAR No. 305294860)

Benson, J. (1998). Review of the Motivated Strategies for Learning Questionnaire. In *Mental measurements yearbook* (13, pp. 680-682). Highland Park, NJ: Rutgers University Press.

Blum, K. D. (1999). *Asynchronous, computer-mediated communication (CMC)-based higher education at a distance: Gender differences in preferred learning styles, participation barriers, and communication patterns* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 9949329)

Bogue, J.P. (1950). *The community college*. New York, NY: McGraw Hill.

Bowen, W., Kurtzweil, M., & Tobbin, E. (2006). *Equity and excellence in American higher education.* Charlottesville, VA: University of Virginia Press.

Bradley, P. (2011, November 28). Enrollments of 10,000 or more [chart]. *Community College Week.* Retrieved from http://www.ccweek.com/News/templates/pdfs/Fastest-Growing/Fastest-Growing2011/Fastest2011_1000-or-more.pdf

Brandon, K. (2009a, July 06). Dr. Biden extols the virtues of community colleges. *The White House Blog*. Retrieved from http://www.whitehouse.gov/blog/Dr-Biden-Extols-the-Virtues-of-Community-Colleges

Brandon, K. (2009b, July 14). Investing in education: The American graduation initiative. *The White House Blog*. Retrieved from http://www.whitehouse.gov/blog/Investing-in-Education-The-American-Graduation-Initiative

Brewer, J. (2011). *P-20 Coordinating Council*. Retrieved from http://www.azgovernor.gov/P20/index.asp

Brill, J. (2008) Likert scale. In P. Lavrakas (Ed.), *Encyclopedia of survey research.* Retrieved from http://sagereference.com/view/survey/n273.xml

Burlison, J., Murphy, C., & Dwyer W. (2009). Evaluation of the Motivated Strategies for Learning Questionnaire for predicting academic performance in college students of varying scholastic aptitude. *College Student Journal, 43*(4). 1313.

Bustamante, C. (2011, November 16). The risks and rewards of online learning. *Community College Times.* Retrieved from http://www.communitycollegetimes.com/Pages/Technology/The-risks-and-rewards-of-online-learning.aspx

Cengage Learning. (2010). *College Success Factors Index (CSFI) 2.0*. Retrieved from http://www.cengage.com/success/csfi2

Center for Community College Student Engagement (CCCSE). (2008). *Essential elements of engagement: High expectations high support (2008 CCCSE findings).* Austin, TX: The University of Texas at Austin, Community College Leadership Program.

Center for Community College Student Engagement (CCCSE). (2010). *The heart of student success: Teaching, learning and college completion (2010 CCCSE Findings).* Austin, TX: The University of Texas at Austin, Community College Leadership Program.

Christensen, C.M. & Eyring, H.J. (2011). *The innovative university, changing the DNA of higher education from the inside out.* San Francisco, CA: Jossey-Bass.

Clingingsmith, D. (1993, May/June). Engendering equity: Fostering computer science success among women and minorities. *U.S. Woman Engineer: Magazine of the Society of Women Engineers*, 38-41.

Cohen, A.M. & Brawer, F.B. (2008). *The American community college* (5th ed.). San Francisco, CA: Jossey-Bass.

Complete College America. (2010). [Interactive Map of high school and college graduation rates April 2, 2010]. *State data: Forging the path to more degrees and credentials.* Retrieved from http://www.completecollege.org/state_data/

Conley, D.T. (2010). *College and career read.* San Francisco, CA: Jossey-Bass.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Counseling Services, University at Buffalo. (2012). *Study habits and test anxiety.* Retrieved from http://ub-counseling.buffalo.edu/stressstudy.shtml

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Cross, K.P. (1980). Our changing students and their impacts on colleges: Prospects for a true learning society. *Phi Delta Kappan, 61*(9), 630-632.

DeCoster, J. (2004). *Data analysis in SPSS.* Retrieved November, 14, 2011from http://www.stat-help.com/notes.html

Diamond, R. (2006). Changing higher education: Realistic goal or wishful thinking? *Association of Governing Boards of Universities and Colleges, Trusteeship, 14* (6) 14-18.

Downing, S. (n.d.). *Data from On Course Program.* Retrieved from http://www.oncourseworkshop.com/Data.htm

Downing, S. (2010). *On course.* Boston, MA: Wadsworth Publishing.

El Khawas, E. (1995). *Campus trends*. Washington, D.C.: American Council on Education.

Elliott, A.J., & Harackiewicz, J.M. (1994). Goal setting, achievement orientation, and intrinsic motivation: A meditational analysis. *Journal of Personality and Social Psychology, 66*(5), 968-980.

Ellis, D. (2003). *Becoming a master student* (10th ed.). Boston, MA: Houghton Mifflin Company.

Emmerson, J. (2009). *Leading them to water: A study of the efficacy of a mandatory placement project in first-year academic courses at a community college* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT No. 3360341)

Estevez, E. F. (2005). *The role of strengths-based case management strategies in the promotion of social capital and academic success of underprepared students* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT No. 3185052)

Felder, R., Felder, G., Mauney, M., Hamrin, C., & Dietz, J. (1995, April). A longitudinal study of engineering student performance and retention: Gender differences in student performance and attitudes. *Journal of Engineering Education*, 151-163.

Ferguson, C. (2009). An effect size primer: A guide for clinicians and researchers. *Professional Psychology: Research and Practice*, 40(5), 532-538.

Gable, K. (1998). Review of the Motivated Strategies for Learning questionnaire. In J.C. Impara & B.S. Plake (Eds.), *The mental measurements yearbook* (Vol. 13, pp. 683-685). Highland Park, NJ: Rutgers University Press.

Gallos, J. (1992). Educating women and men in the 21st century: Gender, diversity, leadership opportunities. *The Journal of Continuing Higher Education, 40*(1), 2-8.

Gardner, J.N. & Hansen, D.A. (2003). Reflections on the future of orientation. In J.A. Ward-Roof & C. Hatch (Eds.), *Designing successful transitions: A guide for orienting students to college* (2nd ed.). Columbia, SC: University of South Carolina.

Gates, M. F. (2010, October 5). Celebrating community colleges and their students. *Foundation Blog*. Retrieved from http://www.gatesfoundation.org/foundationnotes/Pages/melinda-gates-101005-celebrating-community-colleges.aspx

Gray, J. E. (2001). *Emotional intelligence and transformative learning in an online student success course.* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT No. 3004643)

Gumport, P. J. (2007). *Sociology of higher education: Contributions and their contexts*. Baltimore, MD: The Johns Hopkins University Press.

HCM Strategists. (2011). *Beating the odds: What it means and why it is important*. Washington, D.C.: Author. Retrieved from http://www.hcmstrategists.com/content/Beating_the_Odds.pdf

Hadden, C. (2000). The ironies of mandatory placement. *Community College Journal of Research and Practice, 24*, 823-838.

Hall, K.K. (2009). An investigation of a rural community college meeting the needs of nontraditional students. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 3386321)

Hanover Research Council. (2010). *Successful academic intervention programs in community colleges.* Washington, D.C.: Author.

Hanover Research Council. (2011). *Improving student retention and graduation rates.* Washington, D.C.; Author.

Harasim, L. (2000). Shift happens: Online education as a new paradigm in learning. *The Internet and Higher Education, 3*(1-2), 41-61.

Harrell, I.L, & Bower B. L. (2011).Student characteristics that predict persistence in community college online courses. *The American Journal of Distance Education, 25,* 178-191. doi:10.1080/08923647.2011.590107

Herr, K., & Anderson, G.L. (2005). *The action research dissertation: A guide for students and faculty.* Thousand Oaks, CA: Sage.

Huberty, T.J. (2009). Test and performance anxiety. *Principal Leadership, 10*(1), 12-16.

Hunter, M. S., & Linder, W. L. (2003). College seminars for first-year students. In J.W. Guthrie (Ed.), *Encyclopedia of education* (2nd ed.). New York, NY: Macmillian.

Hunter, M. S., & Linder, W. L. (2005). First year seminars. In M. L. Upcraft, J.N. Gardner, & B. O. Barefoot, *Challenging and supporting the first-year student: A handbook for improving the first year of college* (pp. 275-291). San Francisco, CA: Jossey-Bass.

Hunter, M.S., Skipper, T.L., & Linder, C.W. (2003). The first-year seminar: Continuing support for new student transitions. In J. A. Ward-Roof & C. Hatch (Eds.), *Designing successful transitions: A guide for orienting students to college* (2nd ed.). Columbia, SC: University of South Carolina.

Jenkins, D., & Bailey, T. (2009, October 13). How community colleges can reach Obama's goals. *Inside Higher Ed.* Retrieved from http://www.insidehighered.com

Jungert, T., & Rosander, M. (2009). Relationships between students' strategies for influencing their study environment and their strategic approach to studying. *Studies in Higher Education, 34*(2), 139-152.

Keeley, M. (1997). *Managing your time and study environment*. Retrieved from http://faculty.bucks.edu/specpop/time-manage.htm

Kelso, M.G. (2009). *Satisfaction and success of students in regard to a mandatory online orientation.* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT No. 3345503)

Kirwan, W.E. (2007). How the University System of Maryland responded. *Change, 39*(2), 21-25. Retrieved from Alt-Press Watch. doi:1241830501

Lee, J., Jr., & Rawls, A. (2010). *College completion agenda: 2010 progress report.* Retrieved from http://completionagenda.collegeboard.org

Lingo, W. (2009). *The voices and experiences of College 101 students at Kirkwood Community College.* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT No. 3369855)

Lorenzo, G. (2011). *Online education learner engagement & academic success strategies at community colleges.* Clarence, NY: Lorenzo Associates, Inc.

Lumina Foundation. (2010, November). Step 3: Expanding and strengthening lower cost, nontraditional education options through modified regulations. *Four Steps to Finishing First in Higher Education*. Retrieved from www.makingopportunityaffordable.org

Lumina Foundation. (2011, Summer). 'College without walls' uses high-tech tools to open many more doors. *Focus*, 12-21.

Maltz, M. (1960). *Psycho-cybernetics.* New York, NY: Prentice-Hall Inc.

Mamrick, M. (2005). The first year seminar: An historical perspective. In B. F. Tobolowsky. *The 2003 national survey on first-year seminars: Continuing innovations in the collegiate curriculum.* Columbia, SC: University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition.

Marchese, T.J. (2009). Graduation rates: The stakes for boards. *Association of Governing Boards of Universities and Colleges, Trusteeship, 17* (3) 15-19.

Maricopa County Community College District (MCCD). (2009, November). *Maricopa Community Colleges monitoring update (indicators of institutional effectiveness).*Retrieved from https://www.maricopa.edu/gvbd/goals/Monitoring_Report_2009.pdf

Maricopa County Community College District (MCCD). (2011). *Demographics.* Retrieved January 17, 2011, from http://www.maricopa.edu/about/?demographics

Maricopa County Community College District Center for Curriculum and Transfer Articulation. (2009, November). *MCCCD transfer students: Trends and outcomes, (Briefing Paper #2).* Retrieved from http://www.maricopa.edu/academic/ccta/docs/University_Transfer_Brief.pdf

Maricopa County Community College District Center for Curriculum and Transfer Articulation (2011a). *Official course description: (CPD115) Creating College Success.* Retrieved from http://www.maricopa.edu/curriculum/A-C/076cpd150.html

Maricopa County Community College District Center for Curriculum and Transfer Articulation (2011b*). Official course description: (CPD150) Strategies for College Success.* Retrieved from http://www.maricopa.edu/curriculum/A-C/076cpd150.html

Mark, J. (1993, June). Beyond equal access: Gender equity in learning with computers. *NCSEE News,* 92-93

McCabe, R. H. (1998). *Yes we can!: A community college guide for developing America's underprepared.* Phoenix, AZ: The League for Innovation in the Community College.

McCoach, D.B., & Siegle, D. (2003). Factors that differentiate underachieving gifted students from highachieving gifted students. *Gifted Child Quarterly, 47*(2), 144-154.

McGhee, R. M. H. (2010). *Asynchronous interaction, online technologies self-efficacy and self-regulated learning as predictors of academic achievement in an online class* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 3453755)

McKeachie, W. J., Pintrich, P. R. & Lin, Y. G. (1985). Teaching learning strategies. *Educational Psychologist, 20,* 153-160.

McKinney, T.R. (2011). *Institutional effectiveness and a culture of evidence: Accountability cornerstones for the community college in the 21st century* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 3459879)

Mensel, F. (2009, January 18). Father of Pell Grant dies at age 90. *Community College Times*. Retrieved from http://www.communitycollegetimes.com/Pages/Campus-Issues/Father-of-Pell-Grants-dies-at-age-90.aspx

Miller, M., Lincoln, C., Goldberger, S., Kazis, R., & Rothkopf, A. (2009). Courageous conversations: Achieving the dream and the importance of student success. *Change, 41(1), 24-41*.

Mills, G. E. (2003). *Action research: A guide for the teacher* (2nd ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

Mingle, J., Chaloux, B., & Birks A. (2005). *Investing wisely in adult learning is key to state prosperity.* Atlanta, GA: Southern Regional Education Board.

Moltz, D. (2009, November 16). The part-time impact. *Inside Higher Ed.* Retrieved from http://www.insidehighered.com/news/2009/11/16/ccsse

Moore, M. G., & Kearsley, G. (2005). *Distance education: A systems view.* Belmont, CA: Wadsworth Publishing Company.

Morisano, D., Hirsh, J.B., Peterson, J.B., Phil, R.O., & Shore, B.M. (2010). Setting, elaborating, and reflecting on personal goals improves academic performance. *Journal of Applied Psychology*, *95*(2), 255-264. doi:10.1037/a0018478

Morrison, G. R., Ross, S. M., Kemp, J. E., & Kalman, H. (2010). *Designing effective instruction* (6th ed.). Hoboken, NJ: Wiley.

Nakos, G. E., Deis, M. H., & Jourdan, L. (2002). Students' perception of on-line courses: An exploratory study. *Turkish Online Journal of Distance Education*, 3(6), 58-66.

National Center for Educational Statistics. (2011). *Integrated Postsecondary Education State Data Center* [Data File]. Retrieved from http://nces.ed.gov/ipeds/sdc/SP_Profile.aspx

National Center for Public Policy and Higher Education. (2008). *Measuring up 2008: The national report card on higher education.* Retrieved from http://measuringup2008.highereducation.org/print/NCPPHEMUNationalRpt.pdf

Noffke, S., & Somekh, B. (Eds.). (2009). *The Sage handbook of educational action research*. Thousand Oaks, CA: Sage.

Oblinger, D. (2010). For the next generation. *EDUCAUSE Review*, *45*(5), 76–96.

Office of the Chancellor. (n.d.). *ONE Maricopa*. Retrieved from http://www.maricopa.edu/chancellor/onemaricopa.php

O'Gara, L., Karp, M. M., & Hughes, K. L. (2009). Student success courses in the community college: An exploratory study of student perspectives. *Community College Review, 36* (3), 195-218.

Palloff, R. M., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners*. San Francisco, CA: Jossey-Bass.

Pascarella, E. T. & Terenzini, P. (2005). *How college affects students (Volume 2): A third decade of research.* San Francisco, CA: Jossey-Bass.

Pearson, R.W. (2010). *Statistical persuasion*. Thousand Oaks, California: Sage Publications, Inc.

Pennington, H., & Shaw, G. (2010, January 11). *Three policy priorities for improving success beyond high school*. Retrieved from http://www.spotlightonpoverty.org/ExclusiveCommentary

Pintrich, P. R., Smith, D. A. F., Garcia, T. & McKeachie W. J. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ).* Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.

Pintrich, P. R., Smith, D. A. F., Garcia, T. & McKeachie, W. J. (1993). Reliability and predictability validity of the motivated strategies for learning questionnaire (MSLQ). *Education and Psychological Measurement, 53*, 801-813.

Radovich, M. (2011, Spring). Student success, block by block. *U @ Rio Salado Magazine, 2*(3). Retrieved from http://www.uatrio.com

Reason, P., & Bradbury, H. (2008). *The Sage handbook of action research: Participative inquiry and practice* (2nd ed.). Thousand Oaks, CA: Sage.

Rio Salado College. (2009). *Student evaluations for CPD courses for 2009.* [Data file].

Rio Salado College. (2009-2010). *Rio 2009-2010 snapshot by instructional mode.* Retrieved from www.riosalado.edu/about/Documents/2009-2010-snapshot.pdf

Rio Salado College. (2010). *Student evaluations for CPD courses for 2010.* [Data file].

Rio Salado College. (2010-2011). *Meetings of the Rio Salado Strategic Planning Committee.*

Rio Salado College. (2011a). *College snapshot.* Retrieved January 17, 2011, from http://www.riosalado.edu/about/news-resources/college-snapshot/Pages/default.aspx

Rio Salado College. (2011b). *Rio Salado fact book: 2009-2010 report.* Retrieved from http://www.riosalado.edu/about/research-planning/institutional-effectiveness/Pages/default.aspx

Rio Salado College. (2011c). *Student evaluations for CPD courses for 2011*. [Data file].

Rizer, M. (2005, December 16). When students are parents. *The Chronicle of Higher Education 52*(17), B5.

Rodgers, B. (2005, July/August). View (from the board chair): Attracting low-income students is a shifting responsibility. *AGB Trusteeship 7*.

Rosenthal, R. (1991). *Meta-analytic procedures for social research.* Newbury Park, CA: Sage.

Roueche, J. E., & Roueche, S. D. (1993). *Between a rock and a hard place: The at-risk student in the open-door college.* Washington, D.C.: The American Association of Community Colleges.

Russell, C.M., & Phelps, C.L. (2009, October). The effect of mastery-focused goal setting to internalize locus of control and increase academic achievement. Paper presented at the Phi Delta Kappa International, Summit on Quality Education Recruitment and Retention, Bloomington, IN. Retrieved from http://www.pdkintl.org/member/docs/R_Russell_Phelps_2009.pdf

Saxon P. D., Levine-Brown, P., & Boylan, H. R. (2008). *Affective assessment for developmental students, 22*(1), 1-4.

Schuetz, P. G. (2007). Influences of campus environment on adult community college student engagement (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (UMI No. 328823)

Stoutenborough, J. (2008). Semantic differential. In P. Lavrakas (Ed.), *Encyclopedia of survey research*. Retrieved from http://sage-ereference.com/abstract/survey/n527.xml

Stumpf, A. D., McCrimon, E., & Davis, J. E. (2005). Carpe diem: Overcome misconceptions in community college distance learning. *Community College Journal of Research and Practice, 29*, 357-367.

Sumner, J. (2000). Serving the system: A critical history of distance education. *Open Learning, 15*(3), 267-285.

Suzuki, L.A., Ahluwalia, M. K., Arora, A. K., & Mattis, S. (2007). The pond you fish in determines the fish you catch: Exploring strategies for qualitative data collection. *The Counseling Psychologist, 35,* 295-327.

Thomas, S. J. (2004). *Using web and paper questionnaires for data-based decision making: From design to interpretation of the results*. Thousand Oaks, CA: Corwin Press.

Tighe, W. L. (2006). The VCCS online orientation: A faculty survey and syllabi analysis to determine delivery methods of course objectives. *Inquiry, 11*9 (1). 35-38.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago, IL: University of Chicago Press.

Tobolowsky, B. F., Mamrick, M., & Cox, B.E. (2005). *The 2003 national survey on first-year seminars: Continuing innovations in the collegiate curriculum [Monograph No. 41]*. Columbia, SC: University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition.

Tuttle, T., McKinney, J., & Rago, M. (2005). *College students working: The choice nexus. A review of research literature on college students and work*. Bloomington, IN: Indiana Project on Academic Success

Upcraft, M. L., Gardner, J. N., & Barefoot, B. O. (2005). *Challenging and supporting the first-year student: A handbook for improving the first year of college.* San Francisco, CA: Jossey-Bass.

Valencia Community College. (n.d.). *Fact sheet* [Data File]. Retrieved from http://valenciacollege.edu/IR/FactBooks.cfm

Valverde, L. A. (2008). *Latino change agents in higher education: Shaping a system that works for all.* San Francisco, CA: Jossey Bass.

Vaughan, G. B. (2006). *The community college story* (3rd ed.). Washington, D.C.: Community College Press.

Vosberg, A. (2006). *Impact of student success courses on retention and academic outcomes at a Southwestern community college.* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT No. 3241825)

Wellman, J. V. (2002). *State policy and community college-Baccalaureate transfer*. (National Center Report # 02-6). Retrieved from http://www.highereducation.org/reports/transfer/transfer.pdf

Welsh, J. B. (2007). *Identifying factors that predict student success in a community college online distance learning course*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 3300982)

Wilkinson, C.M. (1990, February). Techniques for overcoming test anxiety. *Elementary School Guidance & Counseling*, *24*(3), 234-237.

Wittmaier, B.C. (1972, April). Test anxiety and study habits. *The Journal of Educational Research, 65*(8), 352-354.

Wivagg, J. (2011, September 9). Forced choice. In P. Lavrakas (Ed.), *Encyclopedia of survey research.* Retrieved from http://sage-ereference.com/view/survey/n193.xml

Zeidenberg, M., Jenkins, D., & Calcagno, J. C. (2007*). Do student success courses actually help community college students succeed*? (CCRC brief no. 36). New York, NY: Community College Research Center. Retrieved from http://ccrc.tc.columbia.edu/

APPENDIX A

ALIGNMENT OF COURSE COMPETENCIES

WITH COMPETENCIES TESTED BY MSLQ

Course Competencies	CPD 115	CPD 150	MSLQ
Identify and describe campus student support resources.	X	X	
Identify and apply time-management strategies.	X	X	X
Identify and apply goal-setting strategies.	X	X	X
Identify preferred learning style and describe its relationship to teaching and learning strategies.		X	
Identify and utilize interpersonal communication skills.	X	X	X
Identify and utilize strategies to organize study materials.	X	X	X
Identify and utilize note-taking strategies.		X	X
Identify and utilize textbook, academic, and classroom strategies.		X	X
Identify and utilize test-taking strategies.		X	X
Identify and utilize strategies to improve memory.		X	X
Identify and utilize strategies for critical and creative thinking.		X	X
Describe the process of educational and career planning.		X	
Describe current occupational trends and outlooks.		X	
Utilize career-planning resources.		X	
Develop an education plan.	X	X	
Describe effective behavior in higher education settings.	X		X
Describe college transition issues and identify strategies.	X		
Connect with other students, faculty, staff, and the campus.	X		X

Maricopa County Community College District Center for Curriculum and Transfer Articulation (2011a). *Official course description: (CPD115) Creating College Success.* Retrieved from http://www.maricopa.edu/curriculum/A-C/076cpd150.html

Maricopa County Community College District Center for Curriculum and Transfer Articulation (2011b*). Official course description: (CPD150) Strategies for College Success.* Retrieved from http://www.maricopa.edu/curriculum/A-C/076cpd150.html

Pintrich, P. R., Smith, D. A. F., Garcia, T. & McKeachie W. J. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ).* Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.

APPENDIX B

CPD COURSE COMPETENCIES

Course Competencies	CPD 115	CPD 150
Identify and describe campus student support resources.	X	X
Identify and apply time-management strategies.	X	X
Identify and apply goal-setting strategies.	X	X
Identify preferred learning style and describe its relationship to teaching and learning strategies.		X
Identify and utilize interpersonal communication skills.	X	X
Identify and utilize strategies to organize study materials.	X	X
Identify and utilize note-taking strategies.		X
Identify and utilize textbook, academic, and classroom strategies.		X
Identify and utilize test-taking strategies.		X
Identify and utilize strategies to improve memory.		X
Identify and utilize strategies for critical and creative thinking.		X
Describe the process of educational and career planning.		X
Describe current occupational trends and outlooks.		X
Utilize career planning resources.		X
Develop an education plan.	X	X
Describe effective behavior in higher education settings.	X	
Describe college transition issues and identify strategies.	X	
Connect with other students, faculty, staff, and the campus.	X	

Maricopa County Community College District Center for Curriculum and Transfer Articulation (2011a). *Official course description: (CPD115) Creating College Success.* Retrieved from http://www.maricopa.edu/curriculum/A-C/076cpd150.html

Maricopa County Community College District Center for Curriculum and Transfer Articulation (2011b*). Official course description: (CPD150) Strategies for College Success.* Retrieved from http://www.maricopa.edu/curriculum/A-C/076cpd150.html

APPENDIX C

MOTIVATED STRATEGIES FOR LEARNING QUESTIONNAIRE

Motivated Strategies for Learning Questionnaire Manual

Demographic Information (Drop down of fill-in online survey)

1. Gender Male Female
2. What year did you graduate from high school?
3. Class level
   Freshman
   Sophomore
   Junior
   Senior
4. Ethnic background
   African-American or Black
   Asian-American
   Caucasian
   Latino Other
5. How many hours per week do you work for pay?
6. How many other college level courses have you had in this subject area?
7. How many classes are you taking this term?
8. How many hours a week do you study for this course?
9. Reasons for taking this class (student will choose yes or no for each item).
   A. fulfills distribution requirement
   B. content seems interesting
   C. is required of all students at college
   D. will be useful to me in other courses
   E. is an easy elective
   F. will help improve my academic skills
   G. is required for major (program)
   H. was recommended by a friend
   I. was recommended by a counselor
   J. will improve career prospects
   K. fits into my schedule

Motivated Strategies for Learning Questionnaire

Part A. Motivation

The following questions ask about your motivation for and attitudes about this class. Remember there is no right or wrong answer, just answer as accurately as possible. Use the scale below to answer the questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

1. In a class like this, I prefer course material that really challenges me so I can learn new things.
2. If I study in appropriate ways, then I will be able to learn the material in this course.
3. When I take a test I think about how poorly I am doing compared with other students.
4. I think I will be able to use what I learn in this course in other courses.
5. I believe I will receive an excellent grade in this class.
6. I'm certain I can understand the most difficult material presented in the readings for this course.
7. Getting a good grade in this class is the most satisfying thing for me right now.
8. When I take a test I think about items on other parts of the test I can't answer.
9. It is my own fault if I don't learn the material in this course.
10. It is important for me to learn the course material in this class.
11. The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.
12. I'm confident I can learn the basic concepts taught in this course.
13. If I can, I want to get better grades in this class than most of the other students.
14. When I take tests I think of the consequences of failing.
15. I'm confident I can understand the most complex material presented by the instructor in this course.
16. In a class like this, I prefer material that arouses my curiosity, even if it is difficult to learn.
17. I am very interested in the content area of this course.
18. If I try hard enough, then I will understand the course material.
19. I have an uneasy, upset feeling when take an exam.
20. I'm confident I can do an excellent job on the assignments and tests in this course.
21. I expect to do well in this class.

22. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.
23. I think the course material in this class is useful for me to learn.
24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.
25. If I don't understand the course material, it is because I didn't try hard enough.
26. I like the subject matter of this course.
27. Understanding the subject matter of this course is very important to me.
28. I feel my heart beating fast when I take an exam.
29. I'm certain I can master the skills being taught in this class.
30. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.
31. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.

Part B. Learning Strategies

The following questions ask about your learning strategies and study skills for this class. Again, there is no right or wrong answer. Answer the questions about how you study in this class as accurately as possible. Use the same scale to answer the remaining questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find· the number between 1 and 7 that best describes you.

32. When I study the readings for this course, I outline the material to help me organize my thoughts.
33. During class time I often miss important points because I'm thinking of other things.
34. When studying for this course, I often try to explain the material to a classmate or friend.
35. I usually study in a place where I can concentrate on my course work.
36. When reading for this course, I make up questions to help focus my reading.
37. I often feel so lazy or bored when I study for this class that I quit before I finish what I planned to do.
38. I often find myself questioning things I hear or read in this course to decide if I find them convincing.
39. When I study for this class, I practice saying the material to myself over and over.
40. Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone.
41. When I become confused about something I'm reading for this class, I go back and try to figure it out.

42. When I study for this course, I go through the readings and my class notes and try to find the most important ideas.
43. I make good use of my study time for this course.
44. If course readings are difficult to understand, I change the way I read the material.
45. I try to work with other students from this class to complete the course assignments.
46. When studying for this course, I read my class notes and the course readings over and over again.
47. When a theory, interpretation, or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence.
48. I work hard to do well in this class even if I don't like what we are doing.
49. I make simple charts, diagrams, or tables to help me organize course material.
50. When studying for this course, I often set aside time to discuss course material with a group of students from the class.
51. I treat the course material as a starting point and try to develop my own ideas about it.
52. I find it hard to stick to a study schedule.
53. When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions.
54. Before I study new course material thoroughly, I often skim it to see how it is organized.
55. I ask myself questions to make sure I understand the material I have been studying in this class.
56. I try to change the way I study in order to fit the course requirements and the instructor's teaching style.
57. I often find that I have been reading for this class but don't know what it was all about.
58. I ask the instructor to clarify concepts I don't understand well.
59. I memorize key words to remind me of important concepts in this class.
60. When course work is difficult, I either give up or only study the easy parts.
61. I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying for this course.
62. I try to relate ideas in this subject to those in other courses whenever possible.
63. When I study for this course, I go over my class notes and make an outline of important concepts.
64. When reading for this class, I try to relate the material to what I already know.
65. I have a regular place set aside for studying.

66. I try to play around with ideas of my own related to what I am learning in this course.
67. When I study for this course, I write brief summaries of the main ideas from the readings and my class notes.
68. When I can't understand the material in this course, I ask another student in this class for help.
69. I try to understand the material in this class by making connections between the readings and the concepts from the lectures.
70. I make sure that I keep up with the weekly readings and assignments for this course.
71. Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives.
72. I make lists of important items for this course and memorize the lists.
73. I attend this class regularly.
74. Even when course materials are dull and uninteresting, I manage to keep working until I finish.
75. I try to identify students in this class whom I can ask for help if necessary.
76. When studying for this course I try to determine which concepts I don't understand well.
77. I often find that I don't spend very much time on this course because of other activities.
78. When I study for this class, I set goals for myself in order to direct my activities in each study period.
79. If I get confused taking notes in class, I make sure I sort it out afterwards.
80. I rarely find time to review my notes or readings before an exam.
81. I try to apply ideas from course readings in other class activities such as lecture and discussion.

Pintrich, P. R., Smith, D. A. F., Garcia, T. & McKeachie W. J. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ).* Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.

APPENDIX D

MOTIVATION AND LEARNING QUESTIONNAIRE SCALES AND QUESTIONS ASSIGNED TO EACH SCALE

Motivation Scales	**Learning Strategies Scales**
Scale 1: Intrinsic goal Questions: 1, 16, 22, 24 Scale 2: Extrinsic goal Questions: 7, 11, 13, 30 Scale 3: Task value Questions: 4, 10, 17, 23, 26, 27 Scale 4: Control of learning beliefs Questions: 5, 6, 12, 15, 20, 21, 29, 31 Scale 5: Self-efficacy for learning Questions: 2, 9, 18, 25 Scale 6: Test anxiety Questions: 3, 8, 14, 19, 28	Scale 7: Rehearsal Questions: 39, 46, 59, 72 Scale 8: Elaboration Questions: 53, 62, 64, 67, 69, 81 Scale 9: Organization Questions: 32, 42, 49, 63 Scale 10: Critical thinking Questions: 38, 47, 51, 66, 71 Scale 11: Metacognitive self-regulation Questions: 33, 36, 41, 44, 54, 55, 56, 57, 61, 76, 78, 79 Scale 12: Time and study environment Questions: 35, 43, 52, 65, 70, 73, 77, 80 Scale 13: Effort regulation Questions: 37, 48, 60, 74 Scale 14: Peer learning Questions: 34, 45, 50 Scale 15: Help seeking Questions: 40, 58, 68, 75

APPENDIX E

COVER LETTER FOR ONLINE COLLEGE SUCCESS COURSE

Effectiveness of an Online Community College Success Course

I am a graduate student under the direction of Professor Lisa McIntyre in the Higher & Postsecondary Education Program, Mary Lou Fulton Teachers College at Arizona State University.

I am conducting a research study to collect data on the effectiveness of the college success courses at Rio Salado College using the Motivated Strategies for Learning Questionnaire. I am inviting your participation, which will involve taking The Motivated Strategies for Learning Questionnaire (MSLQ). The MSLQ is a self-report instrument designed to assess college students' motivational orientations and their use of different learning strategies for a college course (your college success course). All students enrolled in CPD 150/115 during will complete the MSLQ assignment at the start of the course and then take the MSLQ assignment again toward the end of their coursework. I am asking you to consent to allowing the (anonymous) responses of your MSLQ assignments to be used in a research study to improve the course.

Your participation in this study is voluntary. You can skip questions if you wish. If you choose not to participate or to withdraw from the study at any time, there will be no penalty; it will not affect your grade.

The possible benefit of your participation in the research is you will determine if the college success course helped you improve online study skills and self-directed learning.

The other possible benefits of your participation in the research are the results will be used to improve the current online college success courses at Rio Salado College.

There are no foreseeable risks or discomfort to your participation.

Your responses will be confidential. The results of this study may be used in reports, presentations, or publications but your name will not be used. The questionnaire will be housed in Perception by Question Mark in *RioLearn*. *RioLearn* is a technically secure computing platform that uses access passwords, up-to-date software, anti-virus/spyware, and firewall protections. Neither the researcher, nor the instructor for the course, will know which students chose to participate in the study. Your performance in the course will not be affected.

If you have any questions concerning the research study, please contact the research team at: Dr. Lisa McIntyre, Mary Lou Fulton Teachers College Farmer Building, Suite 438-B Arizona State University, Tempe Campus 85287-1811, lisa.mcintyre@asu.edu.You can also contact Melanie Abts, Rio Salado College 2323 W. 14th St, Tempe, AZ 85233, melanie.abts@riosalado.edu. If you have any

questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Please let me know if you agree to have your two MSLQ course assignments used for research purposes.

Sincerely,

Melanie Abts

Name_____
Signature_____

APPENDIX F

MARICOPA COMMUNITY COLLEGE DISTRICT

INSTITUTIONAL REVIEW BOARD APPROVAL

Maricopa County Community College
District
2411 West 14th Street
Tempe
AZ, 85281
TEL: (480) 731-8701
FAX: (480) 731 8282

DATE:	January 08, 2011
TO:	Ewing, Kris, Education
	Abts, Melanie, Other
FROM:	MCCCD Institutional Review Board
PROTOCOL TITLE:	Efficiency of an Online Community College Success Course
FUNDING SOURCE:	NONE
PROTOCOL NUMBER:	2010-12-088
FORM TYPE:	NEW
REVIEW TYPE:	EXCEPT

Dear Principal Investigator,

The MCCCD IRB reviewed your protocol and determined the activities outlined do constitute human subjects research according to the Code of Federal Regulations, Title 45, Part 46.

The determination given to your protocol is shown above under Review Type.

You may initiate your project.

If your protocol has been ruled as *exempt*, it is not necessary to return for an annual review. If you decide to make any changes to your project design which might result in the loss of your except status, you must seek IRB approval prior to continuing by submitting a modification form. If your protocol has been determined to *expedited* or *full board review*, you must submit a continuing review form prior to the expiration date shown above. If you make any changes to your project design, please submit a modification form prior to continuing.

We appreciate your cooperation in complying with the federal guidelines that protect human research subjects. We wish you success in your project.

Cordially,
MCCCD IRB

APPENDIX G

ARIZONA STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD APPROVAL

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	Lisa McIntyre
From:	Mark Roosa, Chair Soc Beh IRB
Date:	02/21/2011
Committee Action:	**Exemption Granted**
IRB Action Date:	12/23/2010
IRB Protocol #:	1012005833
Study Title:	Efficiently of an Online Community College Success Course

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(1) (2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX H

DESCRIPTIVE DATA

Table H-1

Student Age Groups

Age Group	Number of Participants	Sample Percentage	Rio Salado Distance Population Percentage
19 and under	17	19%	9%
20-29	27	30%	46%
30-39	16	18%	25%
40-49	21	23%	13%
50+	3	3%	7%
Unknown	7	8%	10%

Table H-2

Ethnicity

Background	No. of Participants	Percentage of Participants	Percentage of Distance Students at Rio Salado College
Asian	3	3.3%	3.5%
African-American	9	9.9%	10.7%
Latino	13	14.3%	13.6%
Other	9	9.9%	10.6%*
Caucasian	57	62.6%	61.7%

Table H-3

Reasons For Taking This Class

	Number of Participants		Percentage of Participants	
	Yes	No	Yes	No
Fulfills Distribution Requirement	51	40	56%	44%
Content Seems Interesting	75	16	82%	18%
Is Required of All Students at College	25	65	28%	72%
Will Be Useful to Me in Other Courses	87	4	96%	4%
Is an Easy Elective	29	62	32%	68%
Will Help Improve My Academic Skills	85	4	96%	4%
Is Required for Major (Program)	22	69	24%	76%
Was Recommended by a Friend	22	68	24%	76%
Was Recommended by a Counselor	50	40	56%	44%
Will Improve Career Prospects	70	19	79%	21%
Fits into My Schedule	66	21	76%	24%

Table H-4

Participant Hours Worked vs. Number of Courses (Percentages)

Number of Hours Worked	1 Course	2 Courses	3 Courses	4+ Courses
0	2 (2.2%)	12 (13.2%)	5 (5.5%)	8 (8.8%)
1 to 9	0 (0.0%)	1 (1.1%)	0 (0.0%)	0 (0.0%)
10 to 19	1 (1.1%)	1 (1.1%)	1 (1.1%)	1 (1.1%)
20 to 29	3 (3.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
30 to 39	0 (0.0%)	5 (5.5%)	5 (5.5%)	4 (4.4%)
40+	4 (4.4%)	16 (17.6%)	12 (13.2%)	10 (11.0%)

Table H-5

Number of Classes for Non-Working Students by Gender

Number of classes	Number of Males	Number of Females	Number of Participants
1	1	1	2
2	3	9	12
3	0	5	5
4	2	3	5
5	0	2	2
6	0	1	1
Total	6	21	27

Table H-6

MSLQ Scales Paired Samples t-tests

Scale	Mean Difference	*SD* of Diff.	*t*	*df*	r^2
Motivational	0.077	1.675	1.759	1471	0.0021
Learning	0.220	2.371	4.407*	2253	0.0085
Both Scales	0.163	2.124	4.697*	3725	0.0059

Note: An (*) denotes significant at $p < .05$.

Table H-7

Motivation Subscale t-tests

Scale	Mean Difference	*SD* of Diff.	*t*	*df*	r^2
Intrinsic Goal	0.261	1.550	2.283*	183	0.0277
Extrinsic Goal	0.179	1.921	-1.267	183	0.0087
Task Value	0.069	1.422	0.805	275	0.0023
Control of Learning Beliefs	0.261	1.629	2.173*	183	0.0251
Self-Efficacy for Learning	0.299	1.334	4.298*	367	0.0479
Text Anxiety	-0.396	2.120	-2.831*	229	0.0338

Note: An (*) denotes significant at $p < .05$.

Table H-8

Learning Strategies Subscale t-tests

Scale	*M* Difference	*SD* of Diff.	*t*	*df*	r^2
Rehearsal	0.043	2.452	-0.208	137	0.0003
Elaboration	0.373	2.163	2.866*	275	0.0290
Organization	0.141	2.439	0.786	183	0.0034
Critical Thinking	0.104	2.281	0.694	229	0.0021
Self-Regulation	0.326	2.325	3.430*	597	0.0193
Time and Study Environment	0.264	2.462	2.053*	367	0.0114
Effort Regulation	0.429	2.069	2.815*	183	0.0415

Note: An (*) denotes significant at $p < .05$.

Table H-9

Course In Which Participant is Enrolled

Course	Number of Participants	Percentage
CPD 115	21	23%
CPD 150	70	77%

Table H-10

Participants by Year in School

Class	Number of Participants	Percentage
Freshman	45	49%
Sophomore	46	51%
Total	91	100%

Table H-11

Paired-Samples t-tests (MSLQ Questions)

Questions	Mean Diff.	*t*	*df*	r^2
1	0.391	1.706	45	0.0607
2	0.196	1.354	45	0.0391
3	-0.739	-2.813*	45	0.1496
4	-0.065	-0.296	45	0.0019
5	0.109	0.443	45	0.0043
6	0.109	0.538	45	0.0064
7	-0.413	-1.571	45	0.0520
8	-0.804	-2.407*	45	0.1140
9	0.043	0.159	45	0.0006
10	-0.043	-0.269	45	0.0016
11	0.022	0.070	45	0.0001
12	0.196	1.220	45	0.0320
13	-0.130	-0.476	45	0.0050
14	-0.174	-0.682	45	0.0102
15	0.609	2.872*	45	0.1549
16	0.304	1.322	45	0.0374
17	0.065	0.272	45	0.0016
18	0.022	0.113	45	0.0003
19	-0.239	-0.650	45	0.0093
20	0.413	1.990	45	0.0809
21	0.283	1.831	45	0.0693
22	0.065	0.348	45	0.0027
23	0.283	1.409	45	0.0422
24	0.283	1.067	45	0.0247
25	0.783	2.558*	45	0.1269
26	0.196	1.026	45	0.0229
27	-0.022	-0.091	45	0.0002
28	-0.022	-0.067	45	0.0001
29	0.391	1.808	45	0.0677
30	-0.196	-0.672	45	0.0099
31	0.283	1.761	45	0.0645
32	0.261	0.855	45	0.0160
33	0.348	1.112	45	0.0268
34	0.261	0.738	45	0.0119
35	0.500	1.670	45	0.0584
36	0.370	1.037	45	0.0234
37	0.500	1.848	45	0.0706
38	-0.348	-0.977	45	0.0208
39	-0.326	-0.978	45	0.0208
40	-0.196	-0.624	45	0.0086

Continued on next page

Questions	Mean Diff.	*t*	*df*	r^2
41	0.174	0.582	45	0.0075
42	0.435	1.324	45	0.0375
43	0.109	0.275	45	0.0017
44	0.239	0.881	45	0.0170
45	0.000	0.000	45	0.0000
46	0.370	1.088	45	0.0256
47	0.261	0.729	45	0.0117
48	0.543	1.553	45	0.0509
49	-0.413	-1.012	45	0.0222
50	-0.283	-0.775	45	0.0132
51	0.500	1.361	45	0.0395
52	0.152	0.426	45	0.0040
53	0.326	0.982	45	0.0210
54	0.283	0.715	45	0.0112
55	0.109	0.353	45	0.0028
56	0.500	1.310	45	0.0367
57	1.109	2.920*	45	0.1593
58	-0.065	-0.142	45	0.0004
59	0.239	0.634	45	0.0089
60	0.522	1.632	45	0.0559
61	0.130	0.342	45	0.0026
62	0.522	1.916	45	0.0754
63	0.283	0.733	45	0.0118
64	0.391	1.338	45	0.0383
65	0.739	2.028*	45	0.0838
66	0.283	1.012	45	0.0223
67	0.370	1.102	45	0.0263
68	-0.152	-0.379	45	0.0032
69	-0.152	-0.500	45	0.0055
70	-0.543	-1.685	45	0.0593
71	-0.174	-0.559	45	0.0069
72	-0.043	-0.116	45	0.0003
73	-0.152	-.502	45	0.0056
74	0.152	0.544	45	0.0065
75	0.217	0.566	45	0.0071
76	0.283	1.012	45	0.0223
77	0.630	1.478	45	0.0463
78	0.283	0.835	45	0.0152
79	0.043	0.109	45	0.0003
80	0.674	1.693	45	0.0599
81	0.783	2.121*	45	0.0909

Note: An (*) denotes significant at $p < 0.05$

APPENDIX I

SPECIAL CONSENT FORM FOR STUDENTS UNDER 18

Rio Salado College

Request for Admission
Students Under the Age of 18

Eligibility:

Admission to Rio Salado Community College **may** be granted to any person **under the age of 18** who achieves **one of the following:**

1. A composite score of 93 or more on the preliminary Scholastic Aptitude Test (PSAT)
2. A composite score of 930 or more on the Scholastic Aptitude Test (SAT)
3. A composite score of twenty-two or more on the Americana College Test (ACT)
4. A passing score on the relevant portions of the Arizona Instrument to Measure Standards (AIMS) test
5. Completion of a college placement test designated by the Community College District that indicates the appropriate college level for the course
6. Is a graduate from a private or public high school or possession of a high school certificate of equivalency

Enrollment in **vocational courses** will be considered on a individual basis if the student meets the established requirements of the courses for which the student enrolls and enrollment is in the best interest of the student.

NOTE:
Admission shall be considered on an **individual basis** and upon written concurrence of the student, parent or guardian, and Director of Admissions, Registration and Records. The final decision for admission and enrollment to any class will be determined by the Director of Admissions, Registration and Records in consultation with the department chairperson. Students must **renew** admittance eligibility **each term** they wish to be enrolled in the Admission for Students Under the Age of 18 program. Students in the Admission for Students Under the Age of 18 program are expected to be fully acquainted with and comply with all current published policies, rules, and regulations.

Required Admission Documents:

Students under the age of 18 requesting admission to Rio Salado Community College must submit the following documents:

- ❑ Request for Admission Students Under the Age of 18 form
- ❑ Student Information Form (SIF)
- ❑ Unofficial high school transcript—including courses. grades, courses in progress, test scores
- ❑ Letter from the student stating reason(s) for enrollment
- ❑ Placement test scores for placement in English, reading or mathematics courses (ASSET, COMPASS, CELSA)
- ❑ Original copy of ACT, PSAT, SAT, or AIMS test scores
- ❑ Proposition 300 documentation

To be Completed by College Official:

- ❑ ACT Scores_____
- ❑ PSAT Scores_____
- ❑ SAT Scores_____
- ❑ AIMS Scores_____
- ❑ ASSET Scores_____
- ❑ COMPASS Scores_____
- ❑ Accuplacer Scores_____
- ❑ Vocational Scores_____

- ❑ Approved
- ❑ Not Approved

_____ Director, Admissions, Registration and Records

_____ Date

For additional information call 480.517.8540 or 480.517.8550.

continued on back . . .

To be Completed by the Student:

❑ Fall ❑ Spring ❑ Sum I ❑ Sum II _____ Year

_____ Student Name _____ Age

_____ Student Identification Number/Social Security Number _____ SAIS (Student Accountability Information System) Number

_____ Home Address _____ City, State, Zip ( ) _____ Home Phone #

_____ Name of School Attending _____ Grade _____ Expected Graduation (mo./yr.)

Class Number	Section Number	Title	Credits
		Total Credit Hours	

I agree to the exchange of academic information between the participating institutions, including but not limited to college grade reports, transcripts, and any other pertinent documents. I give permission to release any and all Rio Salado Community College information to my parents and/or legal guardian.

_____ Signature of Student _____ Date

To be Completed by the High School/Junior High School District Official:

I recommend the student named on this form for Admission - Students Under the Age of 18 to Rio Salado Community College for the _____ term, 20_____. I believe the student will profit from concurrent enrollment. It is also understood that the student will receive college credit for successfully completed course work. The student has a cumulative grade point average (G.P.A.) of _____ on a _____ system with a class rank of _____/_____. Will high school / junior high school credit be granted? ❑ Yes ❑ No

_____ Signature of High School / Junior High School Counselor / Administrator _____ Date

To be Completed by the Parent or Guardian:

I give permission for _____ to enroll as a student at Rio Salado Community College during the_____ term, 20_____. I understand that although he/she is under 18, he/she is entering an adult environment. As a college student, I understand that my son/daughter:

___Will be establishing a college academic record and will be required to report enrollment at Rio Salado Community College to future colleges or universities.

___ Will be responsible for knowing and following college policies published in the General Catalog & Student Handbook and Schedule of Classes.

___Will be subject to the course requirements, grading standards and attendance requirements established by the instructor in the course syllabus.

___May, at times, come in contact with course subject matter of a mature and sensitive nature.

___May be using unfiltered computer systems, common to a college environment.

___Will be protected under the Federal Education Rights and Privacy Act and information about academic performance, attendance and educational records cannot be shared with a "parent" as defined by FERPA without the students written permission, or documented evidence that the student is a dependant according to the Internal Revenue Code of 1986, section 152.

_____ Signature of Parent / Guardian _____ Date

For additional information call at 480.517.8540 or 480.517.8550. 2/08