

By E. J. Anderson
A Dissertation
Submitted in Partial Fulfillment
of the Requirements for the degree of
Doctor of Education
in Educational Leadership

Northern Arizona University

May 2014

Approved:

Walter J. Delecki, Ph.D., Chair

Hilary Misner, Ed.D.

Mary Dereshiwsky, Ph.D

Andrew Lenartz, Ed.D.

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ABSTRACT

BARRIERS AND OBSTACLES TO PARTICIPATING IN HIGH SCHOOL DUAL ENROLLMENT

E.J. ANDERSON

This was a descriptive study to identify the major barriers and obstacles for high school students participating in dual enrollment courses offered by a Southwestern Community College. The community college district in which the college is located is in a large metropolitan area. There are more than 16,000 students who participate in dual enrollment in the Southwestern Community College District. There are ten colleges in the community college district.

Dual enrollment classes are classes in which students earn college and high school credit simultaneously. Dual enrollment classes began in 1987, when students at a small private high school partnered with the one of the ten colleges in the Southwestern Community College District. Research has shown that dual enrollment classes add rigor to the high school curriculum, help students prepare for college level course work, and increase college completion and retention rates. Research has shown that students who participate in even one dual enrollment class benefit, as students' perception of their ability to succeed in college is impacted (Adams, 2012; Kim, 2006). While there are many benefits from dual enrollment, participation significantly varies by high school and

high school district. Some schools have nearly a third of their students participating while others have less than five percent (Kemp, 2013). Because dual enrollment is so beneficial to students, it is important to understand the barriers and obstacles that keep students from participating. Additionally, if factors that motivate students to participate could be identified, it would help to increase participation of students.

This was a descriptive, qualitative study to identify obstacles and barriers to enrolling in dual enrollment courses. The results of this study will help college and high school administrators and faculty develop strategies to overcome the barriers and obstacles to enrolling in dual enrollment. This will hopefully increase the number of students participating in dual enrollment courses which will benefit students, high schools, and colleges.

Dedication

This study is dedicated to my family, especially my husband for all his support and encouragement through my dissertation journey.

Acknowledgement

It is difficult to thank all those who have helped me along this dissertation journey. I feel so fortunate to have had the tremendous support and guidance I had from some many others. First and foremost, I want to thank my husband Scott for his tireless support. Not only did he hold down the fort and never complain he was always there to encourage and support me in my endeavor. Along with my husband, I am grateful to my children James, Seth, Lindsey, Drew and Joslyn and my grandchildren Ryan, Taylor, Nathan, Katie and Wes. My family provided inspiration and motivation as I spent countless hours researching and writing on my study. I also want to acknowledge my parents K.K. and Elizabeth Skousen. Though neither graduated from college, they valued education and would have been so proud of me. I only wish they could have been here to see it.

I am also wish to acknowledge my dissertation committee for their support and assistance, especially my chair Dr. Walter Delecki. It was with his encouragement I began my dissertation journey. He was instrumental in keeping me focused and moving forward to complete my research. There are many others who were there when I needed them. To those including friends, co-workers, my NAU cohort, Gilbert Public Schools Board Members and staff and especially the high schools who allowed me access to their

students, parents, teachers and employees. Thank you. I couldn't have done it without you.

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Chapter 1: Introduction

Background

In 2013 several students in the southwestern part of the United States graduated from college and then less than two weeks later they graduated from high school. While the phenomenon of graduating from college and high school simultaneously is relatively new, in the next few years it will become increasingly more popular as dual enrollment programs flourish in high schools across the state. Taking college classes while still in high school is a growing trend in this community college district as well as the country. In this community college district, there are more than 16,000 students earning dual enrollment credits at the ten sister colleges in this district.

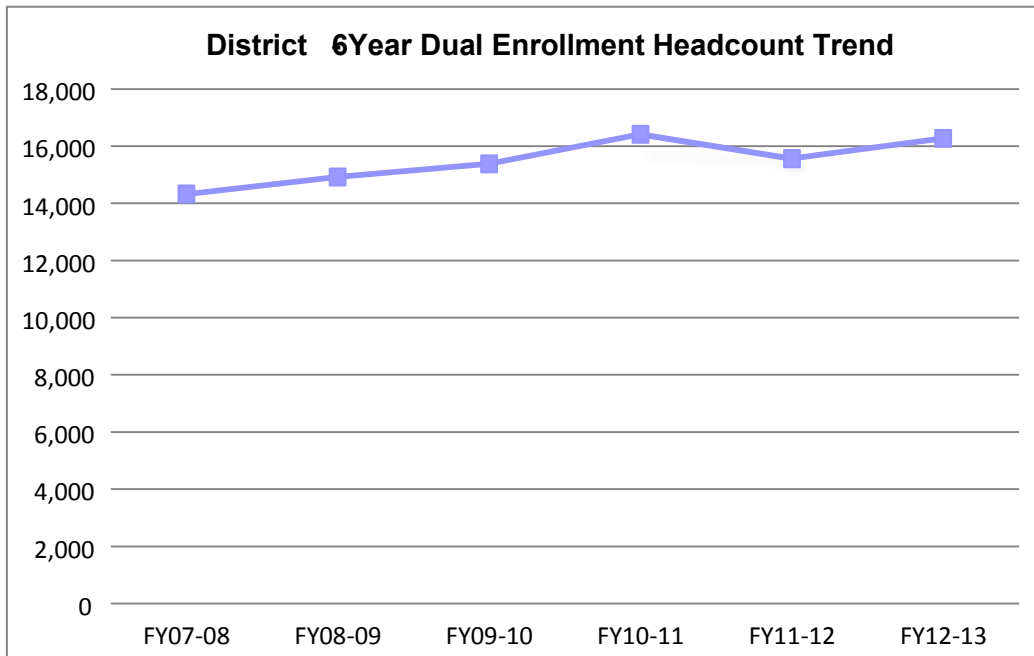


Figure 1. District 6-year dual enrollment headcount trend.

Earning college credit while still in high school, or accelerated learning as it is sometimes called, is implemented and organized in a variety of ways. Dual enrollment courses may be taught on the college campus with high school and college students in the same class. They may be offered at the high school by college staff or they may be offered at the high school by high school instructors who have been approved to teach college level classes. In the Southwestern Community College and at community college where the study took place, dual enrollment courses are taught by high school instructors who have been approved to teach college level courses on the high school campus. Dual enrollment instructors must have 24 upper division or 18 graduate credits in the subject area to be approved to teach dual enrollment. At the community college all high school instructors participate in professional development and must have their dual enrollment syllabi and textbook approved by the college faculty chair of that discipline. The Southwestern Community College is the only college in the Southwestern Community College District system that is NACEP (National Alliance of Concurrent Enrollment Partnerships) accredited as well as the only one in the state (R. Kemp, personal communication, January 18, 2013). NACEP is a national organization whose goal is to advance and support best practices, research, and advocacy for dual enrollment. NACEP (2013) is the only national accreditation organization for dual enrollment programs.

In recent years, there have been dozens of studies documenting the benefits of dual enrollment programs. Dual enrollment programs are effective tools for increasing retention and completion of college. Dual enrollment programs are often seen as “a way to redefine and increase the rigor in coursework in high schools, as well as to keep students

engaged, on track to graduate, and better positioned to succeed in college,” according to findings from the Early College High School Initiative (National High School Center, 2007). According to the National High School Center, too many students are unprepared for college and increasingly many states are turning to dual enrollment as a strategy to accelerate learning and to help students be successful in college. “College retention is a very challenging problem facing our nation,” said Jon Whitmore, ACT’s Chief Executive Officer and former president of San Jose State University and Texas Tech University. “If we are to meet the goal set forth by President Obama to increase the number of young adults who earn a college degree, we must not only ensure that more students have access to college, but also make certain that they are well prepared to succeed once they get there” (ACT, 2011).

According to a report by ACT, many high school students are unprepared for the rigors of college and drop out for a variety of reasons, but one of the biggest issues is the lack of academic skill. Estimates vary, but the College Board (ACT) says nearly 76 percent of the students are unprepared for the rigors of college and 43 percent of the students at two-year public colleges require remedial course work (Bauerlein, 2011). In the Southwestern Community College District, nearly 60% of the students require remediation before taking a college class (R. Kemp, personal communication, January 18, 2013). Dual enrollment programs have become one of the most popular and promising practices to increase college retention and completion rates according to Hoffman, Vargas, and Santos (2009). Not only do dual enrollment courses improve academic achievement and graduation rates, but they also help with job placement. According to Michael

Morrison (2008), in an article titled “The Strategic Value of Dual Enrollment Programs,” dual enrollment with its push for college completion and retention, can aid the United States in remaining competitive in a global economy and reduce workforce shortages and increase the level of educational attainment for those replacing ‘Baby Boomers.’” Other benefits of dual enrollment include:

- Increasing the number of underserved students who are ready for college.
- Providing realistic information to high school students about the skills they need for college (Most high school graduates have no idea they won’t be able to enroll in a college class, but need remediation courses before they begin).
- Saving time and money by compressing the years of financial support needed to attend college.
- Creating a smoother transition for students and feedback from K-12 to postsecondary systems. (Hoffman et al., 2009)

One of the most powerful advantages of dual enrollment courses is the momentum or jumpstart the classes provide for students. Students who are required to spend less time earning a college degree are more likely to graduate from college. According to the Department of Education, if students earn 20 college credits their first year of college, this is a strong predictor that a student will successfully graduate from college. There is a direct correlation between the number of college credits earned and the likelihood of students graduating from college (Hoffman et al., 2009).

Dual Enrollment Courses in Comparison with Traditional On-Campus Classes

One of the biggest concerns in dual enrollment courses is whether students in dual enrollment courses receive the same experience and do as well academically as those in the traditional on-campus class. In a study performed at North Iowa Area Community College (NIACC), dual enrollment students did as well or better in all areas except for one. The study compared outcomes in 17 different areas of dual enrollment students and traditional on-campus students. NIACC found that 18% more of the students matriculate due to dual enrollment programs. This is a huge benefit for NIACC as most of the 18 percent gain in matriculation comes from first-generation students. Having more students go on to college also helps with the projected future workforce shortage of more than eight million workers according to Morrison (2008). Graduation rates were also significantly impacted at NIACC by students who took college classes while still in high school. Students in early college improved their odds of graduation by 61% compared to students who did not participate in dual enrollment opportunities. The finding was after controlling for high school grade point averages, motivation to graduate measured by first term credits, and first term GPA and gender (Morrison, 2008).

Another advantage of the dual enrollment courses for students was the cost savings. Money was saved both by the state and by the parents and students. In the NIACC research, it was estimated that the state of Iowa saved more than \$21.7 million in general aid they would have had to pay for more expensive education institutions by having student participate in dual enrollment opportunities. While the state saved millions, parents and students also benefited from the program, saving an estimated \$30.7 million in

future college-related educational expenses. The study found the total return on investment for the dual enrollment program at NIACC was 535% according to Harvey Siegelement, a former economist of the state of Iowa, and Dan Otto, economics professor at Iowa State University. According to the article, “Acceleration is a win, win program... It is the most popular educational initiative in my region because it meets the needs of students, families, and business and industry,” said Michael C. Morrison President of North Iowa Area Community College (Morrison, 2008).

Dual enrollment classes are popular with many parents, students, and administrators and can be found in high schools across the country. All 50 states have dual enrollment programs which are implemented by a local college or university (Kim, 2006). Nationally there are more than nine identified pathways for high school students to earn college credit with dual enrollment being just one of them. The remaining eight programs include Advanced Placement, Bridge programs, the College Level Examination Program (CLEP), distance learning/virtual high schools and colleges, GED programs that bridge to college, International Baccalaureate, Early and Middle College High School and Tech Prep and College Tech Prep. Of the nine programs that accelerate learning for high school students, 17 states have declared dual enrollment programs as their number one priority for offering students an academic pathway for helping students be successful in college. Next in popularity is Advanced Placement courses and tech prep courses. In both cases, 12 states listed the two as a top priority for preparing students for college success. The report by the Lumina Foundation listed several vital factors for these programs to be successful (as cited by Kim, 2006). The first factor requires a variety of pathways for students to

access accelerated learning options. “A single pathway cannot meet the needs of all diverse student populations who desire and deserve the opportunity to attend college,” states the report. A diverse mix of academic pathways are needed to address the diverse needs of students, the Lumina Foundation Report claims (Kim, 2006). Unfortunately, the single pathway model is embraced by many high school administrators in the Southwestern United States who are focused on building an AP or IB program. Fearful that dual enrollment courses will compete with existing AP or IB courses, they refuse to allow students to choose from a variety of pathways (R. Kemp, personal communication, January 18, 2013). Demonstrating the need to have a variety of pathways was a personal story told by a high school counselor from a Southwestern United States high school. Her son, a gifted student, enrolled in all AP courses. He failed to score high enough on any of the AP exams so earned no college credit upon high school graduation. Her daughter was a hardworking student but with no exceptional abilities. Enrolling in all dual enrollment courses, the daughter graduated from high school with 28 college credits (B. Koniar, personal communication, 2012). The college credits gave her both momentum to complete her degree and the self-confidence to do so. Additionally for accelerated learning programs to be successful the Lumina Foundation reported the partnerships between high schools and colleges need to become embedded in the organizational and curricular structures so that leaders and faculty are engaged and rewarded for participating in reform (Kim, 2006).

Dual enrollment courses are a key factor in increasing college completion and retention rates. Several studies across the country have documented the impact dual

enrollment courses have on graduation rates. In a study done by Dr. Joni Swanson (2010) at the University of Iowa, dual enrollment courses gave students momentum, propelling them into upper-division classes earlier, thereby increasing the likelihood of students graduating. Dual enrollment credits give students momentum for earning and completing a college degree. Students who earn 20 dual enrollment credits have a 28% higher chance of graduating from college and going on to a second year of college. Dual enrollment students also have higher grade point averages when they get to college and are more likely to graduate from college in 4 or 6 years. Additionally results of the study showed that dual enrollment students were 11% more likely to persist through the second year of college than non-participants, and 12% more likely to enter college within seven months of high school graduation. The study also suggests that dual enrollment courses foster more positive attitudes towards earning post-secondary degrees in students who did not previously hold these attitudes (Swanson, 2008).

While the research shows there are many benefits of enrolling in dual enrollment classes, many students do not participate. Some students enroll in dual enrollment classes nearly every semester while they are in high school. Others never register for one. At one high school in the Southwestern United States, more than a third of the students participate in dual enrollment classes. At another high school with similar demographics, less than 5% of the students participate in dual enrollment classes. While dual enrollment courses have great benefits for students, many students do not participate in them. Little research has been done in Southwestern United States to identify and explain why some high schools have high dual enrollments and others have low dual enrollment participation.

What are the barriers and obstacles for students enrolling in dual enrollment? Can those barriers and obstacles be overcome? Is it lack of information about dual enrollment? Do students and parents not understand the benefits? Is it the cost of dual enrollment classes that keep students from enrolling? Do high school teachers and counselors play a role in determining if students participate? These questions are important issues to resolve so that more students may participate and enjoy the benefits of dual enrollment courses.

Statement of the Problem

This study was designed to try to identify the barriers and obstacles for Southwestern United States high school students to participating in dual enrollment classes. This study also identified whether there are factors that motivate students to participate in dual enrollment courses. The study examined the factors that impact dual enrollment participation and the effect counselors, parents, and other administrators have on students participating in dual enrollment courses.

Purpose of the Study

In the Southwestern United States County, there are dozens of high schools participating in dual enrollment courses. Some high schools have flourishing programs with hundreds of students participating while other high schools with very similar demographics have very small dual enrollment programs with very few students participating. What was the difference in those high schools? The purpose of the descriptive study was to determine and identify the barriers and obstacles for students in the Southwestern United States to enrolling in dual enrollment courses. What motivated students to participate? Did leadership, race, gender, or social class affect enrollment?

Research Questions

1. Are students and parents aware and informed of dual enrollment opportunities at their high school? Is communication or lack of information about dual enrollment opportunities a significant barrier to participating in dual enrollment courses?
2. Who are the decision makers when it comes to participating in dual enrollment classes--parents, students, counselors, administrators, peers?
3. What is the biggest obstacle to enrolling in a dual enrollment class—lack of information and communication about the program, lack of understanding of the benefits, registration difficult to understand, lack of teacher interest?
4. What is the biggest motivator in students participating in dual enrollment classes?
5. Does economics or social class impact participation in dual enrollment? Is there a correlation between dual enrollment participation and participation in the free and reduced lunch program?
6. Does ethnicity and gender impact dual enrollment rates? Are there more females enrolled and less males students? Do more students who are White enroll than those of a different ethnicity?

Significance of the Study

Like many colleges across the country, the Southwestern Community College spends countless hours and hundreds of dollars developing dual enrollment programs. Some high school programs flourish with dozens of students benefiting from college

courses taken on a high school campus earning high school and college credit simultaneously. But there are also many high schools who fail to thrive and some even decrease in participation. This hurts the students, the high school, and the college. Students who participate in dual enrollment classes are more likely to graduate from college, have higher grade point averages and save a significant amount of time and money in their college career.

High schools in the southwestern United States district also benefit from their students participating in dual enrollment classes as most districts earn a significant amount of money for having students enroll in dual enrollment courses. These funds are earmarked to aid high schools in providing additional professional development opportunities and providing textbooks and lab equipment for students. High school teachers who are approved to teach college classes to their high school students receive professional development from the Southwestern Community College faculty. They also receive the benefits of collaborating with college faculty as well as college approved high school teachers from across the Southwestern United States County. Syllabi are reviewed by college faculty to ensure college rigor and that course competencies are met. Textbooks for dual enrollment courses are provided by the high school, saving parents additional money while earning the benefits of dual enrollment courses.

The Southwestern United States spends considerable funds recruiting students to participate in dual enrollment courses. There are four site coordinators at Southwestern Community College whose full-time job is recruitment and registration of dual enrollment students. Most high schools have an administrator assigned to the task of ensuring dual

enrollment opportunities are provided to students. Counselors and teachers also spend a considerable amount of time recruiting and promoting dual enrollment opportunities.

While there are many studies documenting the benefits of participation in dual enrollment programs, there seems to be very little research to determine what the barriers and obstacles for participating in DE courses. This study could not only help colleges determine how best to inform and disseminate information about dual enrollment, it could also be an effective money-saver if barriers and obstacles were identified and more effective recruitment and registration processes could be put in place. Each year hundreds of students fail to participate in dual enrollment courses because of barriers and obstacles. If those could be eliminated or significantly reduced it would be positive for high schools, colleges, students, and parents. Significant monetary funds are also impacted when students fail to participate in dual enrollment courses. This study will be extremely beneficial to college and high school administrators by providing information to decision makers what obstacles and barriers keep students from participation in dual enrollment courses. If the obstacles and barriers for enrolling in dual enrollment courses could be identified, college and high school staff and administrators could work to reduce those barriers thereby increase participating and enrollment in this program. Increased participation in dual enrollment classes could improve college retention and graduation rates, increase rigor in the classroom and reduce the cost of a college education.

Definition of Terms

Accelerated learning—Classes providing opportunities for students to earn college credit while still in high school (Swanson, 2008).

Advanced Placement — Classes which require passing a national exam at the end of the course and scoring a 3, 4 or 5 in order to receive college credit.

AGEC—The Arizona General Education Curriculum (AGEC) is a 35-semester credit “block” that you can complete at Southwestern Community College. Completion of the AGECE means that you will have met the lower division general studies requirements at the Arizona public universities (Rio Salado College, 2013).

Associate Degree—A degree awarded for completion of a minimum of 60-64 credits selected to meet specific requirements, and designed for transfer to a university (Rio Salado College, 2012).

Catalog—The annual publication which explains college policies, procedures, and programs, including courses descriptions (Rio Salado College, 2012).

Catalog year—A policy that allows students who maintain continuous enrollment to follow the program requirements of the catalog year in which they began.

Class/Section Number—The five digit code following the subject code and course’s number in the schedule of classes which identifies the location and time of the class (Rio Salado College, 2012).

Course description—The brief official statement of the content and pre-requisite and or co-requisites of each course included in the catalog (Rio Salado College, 2012).

Course’s Number—The three digit number following the subject code which identifies a particular courses such as ENG101 as First-Year Composition (Rio Salado College, 2012).

Credit Hour—Numerical unit assigned to courses based on the amount of time spent in class. In addition to the class time, students will need to plan to dedicate significant time outside of class to study and complete assignments (Rio Salado College, 2012).

Course Competencies—Skills to be taught in the course

Dual Enrollment—A program in which students takes classes at their high school and earn high school and college credit simultaneously. Classes are taught by high school instructors who have the necessary professional credential supported by instructors at the community college classes (Rio Salado College, 2012).

Syllabus—A course outline and information on classroom policies, tests, dates, and material to be used in a class (Rio Salado College, 2012).

Transcript—An official record of a student’s course work and grades (Rio Salado College, 2012).

Transfer credit—Credit earned at other regionally accredited institutions that is accepted at Southwestern Community College. Credits accepted in transfer do not necessarily apply to all certificates and degrees (Rio Salado College, 2012).

Concurrent enrollment—College classes in which high school students can earn college and high school credit taken at the college (Rio Salado College, n.d.).

Intergovernmental agreement—Agreement between high school and colleges outlining specific duties and responsibilities of each.

Dual Enrollment Catalog—Classes approved by the Instructional Councils that can be taught as dual enrollment classes (Rio Salado College, 2012)

Limitations of the Study

To reduce threats to internal validity that data collected was analyzed looking at the four criteria for assessing soundness of a qualitative study from Lincoln and Guba (Dereshiwsky, 2012). Students at both high schools answered the student survey much the same way. Additionally, teachers, parents, administrators and counselors answers were also similar. The focus group interviews provided rich, thick descriptions to the short answers the students provided allowing the triangulation of data (Dereshiwsky, 2012). The findings of the research is believable and plausible as the findings with the study compare with research performed in other but similar areas including college recruitment and studies on culture.

Internal validity was also impacted by the schools themselves. Both high schools greatly vary in their mix of teachers, counselors, and administrators. Individual personalities of college personnel and work ethic may have affected the study. There was a great deal of difference between the two high schools in the level of support the researcher received. This could have had an impact on the study as teachers and students believed the study results were more important at one school than the other. Additionally, teachers and counselors may have been reluctant to voice opinions that differed with school administrators.

The student sample population may have an impact on validity. The two high schools had vastly different return rates. At one school informed consent forms were distributed to 125 students and 79 were returned. At the second high school 62 informed consent were distributed and 21 were returned. In a second attempt to gather more

surveys, 100 new informed consents were sent home. No students returned the permission slips. A third attempt was made and 100 additional informed consent were sent home. Again no informed consent were returned. Teachers at the two schools may have felt more administration support in one school than another and may have made more effort to get students to return the informed consent forms. This may have also had an impact on the student survey return rate. My role as a college administrator responsible for this program may also have an impact on the study as teachers and counselors may feel they need to be more positive than the really were. In the focus group discussions I felt they were more than honest. Some almost felt like they were venting their frustration of the program. My personal bias of the program may have also had an impact on the data collecting and analysis. Students were survey in January. Students surveyed at different times of the year may have had different responses to the questions on the survey.

Delimitations

The study will take place in the Southwestern United States which may not be generalized to the whole population outside Maricopa County since dual enrollment programs do not operate the same throughout the country. The time period when students are surveyed is critical. Surveys at different times of the year may impact results since information and attitudes about dual enrollment may change over time.

Summary

Chapter 1 of the dissertation is an overview of the study. In this chapter, dual enrollment is defined and explained along with the various dual enrollment models. As dual enrollment is a national trend, it is important to understand the significant role dual

enrollment plays as one of the strategies to increase college completion and retention (Hoffman et al., 2009). In the Southwestern United States the program is important to both students and administrators at the high school and college level. If obstacles and barriers can be identified, college and high school staff and administrators can work to reduce those barriers thereby increase participating and enrollment in this program. This will have a significant impact on students and teachers in a variety of ways including increased opportunities for students, higher retention and completion rates, and increased funding for both high schools and colleges in Maricopa County.

Chapter 2 will be a review of the literature. While dual enrollment is a relatively new program there are numerous studies that have been done in the last decade documenting the benefits of dual enrollment. An overview of the history of dual enrollment is provided along with a review of the studies documenting the benefits of participation in dual enrollment. The review also focuses on participation including who is more likely to participate and how those specific students benefit from enrolling. Additionally, the review also covers strategies to enhance instruction in dual enrollment classrooms.

Chapter 3 will discuss the methodology and design of the study. This is a descriptive qualitative research study. This chapter will also include research questions, design, population, and sampling. While this study is qualitative, “quantitative and qualitative researchers often use similar elements in their work and their methods should be viewed as more on a continuum than as a dichotomy” (Glesne, 2011). “Qualitative research is research that blends conceptualization with sufficient descriptive detail to

allow the reader to reach his or her own conclusions about the data and to judge the credibility of the researcher's data and analysis" (Corbin & Strauss, 2008, p. 302). My use of qualitative data help me obtain rich descriptive data to identify barriers and obstacles. As dual enrollment is a relatively recent program in education there a numerous studies documenting the benefits but very little data about enrollment questions. There are also studies about who enrolls in these programs but not what motivates students to enroll and what barriers and obstacles keep students from enrolling. Initial data was gathered from student surveys. The survey consisted of questions in a variety of styles included those using a Likert-scale to rate intensity, ranking of the best answer, fill in the blank and multiple choice. The data was tallied and student responses compiled. Once the student surveys were completed and the data tallied and compiled more in-depth questions were asked to focus group participants. The focus group discussions were designed to try to get delve into the study survey response and get their perspective of high school administrators, counselors, teachers and parents. Chapter 4 covers the research findings including the student's survey results and the focus groups. Chapter 5 will include conclusions and recommendations of the findings.

Chapter 2: Review of the Literature

Why Dual Enrollment?

There is a national movement to ensure high school graduates are career and college ready. High school administrators and school boards want to make sure their graduates have the skills to be successful whether they chose to continue on to college or a begin a career right out of high school. Post-secondary institutions are struggling with the completion agenda. Too many students are taking too long to graduate or never graduating at all. As educators across the country look for solutions, dual enrollment is often named as one of the most promising strategies, for both arenas (Bahr, 2012). Research shows dual enrollment courses help prepare students to be college and career ready along with helping retain and motivate students to be college graduates.

The challenge of preparing students for success is a K-12 and post-secondary issue. Tough educational issues such as high numbers of college dropouts, increasing numbers of students who require remediation classes, and unprepared students for the workplace have administrators and policy makers looking for answers (Edmunds, Berstein, Willse, Arshavsky, & Unlu, 2010). The problems are not new to administration, and they will continue to challenge current educational institutions. College completion rates are dismal; nearly thirty percent of college and university students drop out during their first year of college and half never graduate. For more than three decades, college completion rates in the United States have stalled and for minority students the overall completion record has gotten even worse.

“The colleges want us to think everyone graduates, but in fact a huge number don’t and many leave with significant loan debts and job skills totally inadequate in the 21st century,” said Kate Haycock President of the Education Trust, a nonprofit group in Washington that works to close achievement gaps (Bowler, 2009). Most states battle a similar issue—trying to get student’s career and college ready and to complete a college education. In North Carolina only 70 out of 100 students who start ninth grade in a public high school will graduate from high school. Of the 42 who go on to enroll in a college only 19 of them complete a two-year or four year degree (Edmunds et al., 2010, 348-364). Today nationally less than 50% of students enrolled in college will earn an associate degree within three years or a bachelor’s degree within six years. Even more alarming is the dropout rate. Twenty-five percent of the full-time freshman at four-year institutions drop out and 39% of the freshmen at two-year institutions do not return the following fall. The rates are even worse for part-time students (Karp, 2012).

Benefits of Dual Enrollment

Today, much of the research validates dual enrollment programs as one of the best methods of addressing college retention and completion rates. Furthermore dual enrollment courses enhance the academic rigor of the high school curriculum, provide students with a broader range of courses and electives, introduce high school students to college expectations, make education more interesting and relevant, help students make the transition from K-12 to post-secondary better, and reduce the cost of a college education (Bahr, 2012). Students who participate in dual enrollment courses are more likely to go on to college and earn better grades. In the article “Dual Enrollment Offers

Benefits and Faces Roadblocks,” it was reported that dual enrollment students compared with their peers are 12% more likely to enter college within seven months of graduation and earn more credits three years after high school graduation than non-participants. The cumulative grade point averages of dual enrollment students three years after high school are significantly higher than those students who do not participate in dual enrolment (Bahr, 2012).

In Texas an extensive study done by Jobs for the Future, found dual enrollment participation gives students an edge (Struhl & Vargas, 2012). The study found that of 32,908 high school students dual enrollment students are 2.2 times more likely to enroll in a two or four-year college, 2.0 times more likely to return for second year of college, and 1.7 times more likely to complete a college degree. Study participants were of similar academic and social backgrounds. The study also found dual enrollment participants were more likely to earn a degree than non-participants. Of the two groups, 54% of the dual enrollment participants earned a college degree while just 37 percent of the non-participants earned a college degree (Adams, 2012b).

One of the largest studies on the benefits of dual enrollment courses was done by The City University of New York’s College Now program (Allen & Dadgar, 2012). The study used data from early research and tried to account for the differences in demographic characteristics and pre-existing academic differences between program participants and non-participants. While focusing on evaluating differences in participants and non-participants the authors of the study admitted their concern of unobserved pre-existing differences between program participants and nonparticipants. The study used a

separate statistical strategy that accounted for both observable and unobservable differences among participants. A large sample size was used so program estimates of program effects would be more precise. Success in the study was defined by three different outcomes: First, the number of credits earned during their first semester of college, (excluding dual enrolment credits), second, first semester grade point averages, and last, retention to a third semester of college. In the first outcome all observable differences among students were accounted for. The study accounted for both demographic and prior achievement controls including race, gender, age, indicators for free or reduced lunch and language minority status, and scores for English language arts, mathematics, and global history. Previous studies documenting benefits of dual enrollment on post-secondary attainment and reduction of time to earn a degree were predominantly qualitative and based on single institution samples. In the CUNY study, a sample size of 22,962 first-time freshman was used. The extensive study supported both Karp's and Swanson's research showing that enrollment in dual enrollment courses reduces the time to earn a college degree not only by helping students earn college credits, but also by increasing credit attainment even after students enter college (Allen & Dadgar, 2012).

The program serves not only the highest academic achievers but also the students in the academic midrange—students on track to graduate but not excelling in high school. Additionally the CUNY study found students who participate in College Now were more successful in their post-secondary career and also showed positive difference in several categories, such as grade point average and credits earned in the first semester of college (Kim, 2012).

Dual enrollment participants also benefit by learning college expectations while they are still in high school. College classes taught to high school students allow them to learn skills necessary to be successful in college. Students who participate in dual enrollment courses learn study skills, time management, and navigation through the complicated world of post-secondary education. Furthermore, dual enrollment courses teach students to become proficient in studying, to learn time management skills, and to give students a realistic experience in understanding the complex system of bureaucratic requirements needed to succeed in college (Karp, 2012).

Dual enrollment students benefit by participating in rigorous college course work in high school that force students to learn analytical thinking and contextual skills. Dual enrollment students also develop an awareness of the college culture and process while still in high school. Studies suggest that students who learn nonacademic skills that help them acclimate to college increase their chances of success (Karp, 2012).

Dual enrollment can be seen as a social intervention in which potential college students learn about the norms, interpersonal interactions, and behaviors expected for college success. By trying on the role of a college student, dual enrollees benefit from early exposure and practice, come to feel comfortable in a college environment and ultimately becoming successful once they matriculate. (Karp, 2012, p. 23).

Dual enrollment courses can even help high schools struggling with apathetic seniors who are ready to graduate and are no longer interested in applying themselves to their studies. High schools struggling with students suffering from the “senior slump” use dual enrollment courses to challenge students and motivate students to focus on academics. Students suffering from “senior slump” have often already completed their most challenging classes and high school graduation tests and college entrance exams are

over. Likewise, grades made in the last year are often not included in college applications and high school transcripts and with No Child Left Behind testing virtually nonexistent after tenth grade leaves some students less than motivated to do their best academically (Adams, 2012). Dual enrollment classes can motivate students to apply themselves as they realize grades in dual enrolment classes will follow them on their college transcript. Motivating students in their last year of high school is especially beneficial for students who are not going on to selective colleges or not entering the workforce after graduation, said Stanford University Professor Michael W. Kirst (Adams, 2012).

“The most vulnerable are the vast majority who go to secondary programs with open-access policies. They know they can get into community college. Students don’t get the clear message that there are placement exams or that they will need remediation. If students skip math and science in their senior year they often don’t remember the basics and start out at a disadvantage,” said Kirst (Adams, 2012b, p. 35). Allowing students to earn college credit while still in high school keeps students focused and prepared for college. Dual enrollment courses help to prepare students to be college ready as they often motivate students to new levels of enthusiasm for studying when they are working towards college goals (Adams, 2012). Research suggests that even taking a single dual enrollment class significantly increases the chance of students attending college and graduating. Allowing students to experience real college coursework is one of the best ways to prepare students to be successful in college (Struhl & Vargas, 2012).

The benefits of dual enrollment are important and may be even more important for some populations of students including male students, low-income students, and students

with low grade point averages. In the article “Dual Enrollment and Credit Based Exam Courses at Public High Schools,” it was found that these students benefit as much if not more from enrolling in dual enrollment courses. Additionally the research found that first-generation college students benefited more from dual enrollment courses than students with college-educated parents. (Thomas, Marken, Gray, & Lewis, 2013). Likewise CUNY found that dual enrollment courses have positive impacts on males, Black and Hispanic students, and students scoring less than mastery on placement tests (Kim, 2012).

Difference Between AP and IB

Dual enrollment, Advanced Placement, and International Baccalaureate programs are all ways high school students can earn college credit while still in high school. But while the three have similarities they also have some major differences. To begin with, the dual enrollment and AP/IB programs target different populations. While AP and IB concentrate on the academic elite, dual enrollment programs focus on the general population. Furthermore, AP and IB programs differ in yet another fundamental way. AP and IB courses require students to take a college-level achievement test and receive a qualifying score to earn credit. Dual enrollment classes use a student’s grade at the end of the course to determine whether the students will receive college credit (Dutkowsky, Evensky, & Edmonds, 2006). According to Dutkowsky et al., the dual enrollment assessment method is more aligned with traditionally recognized fundamental education principles that dislike high-stakes testing.

Another significant difference between AP/IB and dual enrollment courses is the percentage of students who earn college credit. Dual enrollment students earn college

credit more often than their classmates enrolled in AP/IB courses. In a comparison study at Syracuse, Dutkowsky et al. (2006) found that 54 percent of the students who take the AP test scored a 3 or above thereby receiving college credit while 91% of the dual enrollment students received college credit (Dutkowsky et al., 2006). And while 54 percent of the students taking the AP test earn college credit, this is actually overstating the percentage of students earning college credit since not all students enrolled in AP courses take the AP test.

At the Southwestern Community College 99% percent of the dual enrollment students earn college credit while the top ranked Southwestern United States High School, had a 20% pass rate on the AP test (U.S. News and World Report, 2013).

Besides the high stakes testing at the end of the course, AP students also must deal with the challenge of the AP test. Some students take the AP class in the fall, but must wait until spring before taking the test. (Dutkowsky et al., 2006).

Dual Enrollment and Remediation

Dual enrollment prepares students for college by giving them a realistic assessment if they are college ready. Students who participate in dual enrollment math and English classes must pass the college placement test before taking the class. Placement tests allow both the high school and the students to know if they will need remedial classes once they graduate from high school. High schools get immediate feedback on how well prepared their students are for college courses work. Currently in the Southwestern United States district nearly 60 percent of the students enrolling in one of the 10 community colleges will need remedial classes (R. Kemp, personal communication, January 18, 2013). Most

students who graduate from high school have no idea they are not prepared for college classes and will be required to take remedial courses before enrolling in college level courses. Taking the placement test as a high school sophomore or junior give student's valid data on how well prepared their high schools students are for the rigor of college course work.

Dual Enrollment Admittance Standards

While dual enrollment programs are held across the state, admittance policies are not standardized. In some states minimum grade-point averages are used to determine eligibility. In other states dual enrollment programs are limited to students in the 11th and 12th grades. And while some states limit participation in dual enrollment program, some programs even accept students in developmental education classes and find success. CUNY is one of the programs that allow academically challenged students to enroll in college classes (Kim, 2012). The New York program provides students with multiple pathways to Access College level course work. Those pathways include college credit courses, zero-credit developmental courses, pre-college courses for high school credit, experiential based summer programs, and college advisory and awareness workshops. The program also offer students access to campus facilities and student support services such as writing centers or tutoring centers to help students succeed. Most of the college courses offered for dual enrollment students are general education classes. Students taking English and math classes must meet minimum eligibility requirements before enrolling. Some of the other dual enrollment courses require a minimum grade point average to enroll. In the summer CUNY offers full-day, theme-based summer programs on the college campus to

attract more high school participation. These are funded through a competitive application approval process. Most of the summer programs are designed around college-credit courses and supplemented by an afternoon workshop. This gives students a chance to apply course content to a hands-on-activity. Generally students do better in the summer camp programs since they only have one class on which to focus (Kim, 2012). The pre-college courses and college activities allow students college access at multiple entrance points. The programs are also designed to engage students who may not be ready academically for college course work. Activities are designed by both high school and college faculty.

The First Dual Enrollment Programs

Dual enrollment opportunities for high school students are fairly new in educational history. While several post-secondary institutions claim to be the first to offer dual enrollment, it is difficult to determine which college and university was truly the first. Project Advance began in 1973 in New York. The program began when seven local high school principals and their superintendent meet with university staff members to develop a program that would challenge high school seniors. Many of these seniors had already completed all of the requirements for high school graduation by the end of their 11th year in high school. Connecticut also boasts of having one of the oldest dual enrollment programs in the country. Saint Louis University is another post-secondary institution that claims to have held the first dual enrollment course in 1959. Jamestown Community College in New York held its first dual enrollment courses in 1978. Eleventh grade

students at the top of their class were invited to participate in two summer classes prior to their senior year (Puyear, Thor, & Mills, 2001, p. 33)

Today, dual enrollment courses are offered at high schools across the country. In the last few years dual enrollment classes have steadily increased in popularity, and in the 2010-11 school year, 82% of the United States high schools offered dual enrollment courses while only 69% offered AP or IB courses. But while there were more high schools offering dual enrollment courses, more students took AP and IB courses. Approximately 2 million students participated in dual enrollment classes while 3.5 million students took AP and IB courses. Most often dual enrollment courses are a mix of academic and career and technical/vocational subjects. The ratio nationally is that 76% of the time classes are academic and 49 percent are career and technical/vocational courses (Thomas et al., 2013).

State Policies and Legislation on Dual Enrollment

Dual enrollment policies vary by state and sometimes even within the state. There is no national policy for dual enrollment courses. Some states offer financial incentives to teachers and high schools. Others give students free tuition or offer courses at a reduced fee. Some pay their high school dual enrollment teachers while others are prohibited by state law (R. Kemp, personal communication, January 18, 2013).

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In the southwestern United States all 10 colleges in the Southwestern United States College District offer dual enrollment opportunities. The Southwestern Community College is the largest provider of dual enrollment courses in the state and was the first community college to offer dual enrollment. The college first partnered in 1987 with a small private college preparatory school (R. Kemp, personal communication, January 18, 2013). By the early 1990's, high schools across the Southwestern United States Maricopa County were beginning to show interest in offering dual enrollment classes (R. Kemp, personal communication, January 18, 2013). While high schools and post-secondary institutions developed collaborative partnerships the legal ramifications were also being discussed and developed. Legal rulings at the time allowed both the colleges and the high schools to count students for both ADM (Average Daily Membership) and FTSE (full-time student equivalent, Puyear et al., 2001). This is very important since this current funding model allows both high schools and community colleges to collect state funding for students. The Southwestern United States Community Colleges pay their partnering high school a stipend which is based on student enrollment for their participation (R. Kemp, personal communication, January 18, 2013).

Initially, one of the biggest concerns and challenges in Arizona's dual enrollment programs was the quality. Determined to emulate the academic rigor of the college classes offered on site at the community college, the Arizona Council of Academic Administrators developed minimal standards for colleges across the state which wanted to offer dual enrollment courses.

Those standards included:

- Credit would be granted by the community college;
- Courses offered would be evaluated and would have met the official college curriculum approval process to include outlined competencies, grading policy, and attendance requirements;
- Students admitted to the college courses would follow the established admissions assessment and placement policies;
- Faculty members must have a community college certification and must be selected and evaluated by the college using approved college procedures;
- All textbooks must be college level and approved by the college faculty.

(Puyear et al., 2001)

Recruitment and Challenges of Enrolling Students in Dual Enrollment Courses

While high school districts are focused on programs and practices that will prepare students to be college and career ready, dual enrollment programs face the daunting task of recruiting and registering students to participate. Successful dual enrollment programs must not only boost college and career readiness in students but must also motivate students and parents to participate. A key element in motivating students to enroll is

educating parents and students about the benefits and the process. In the Southwestern United States county schools most schools still have less than 10 percent of the students participating in dual enrollment courses. Additionally, outreach efforts for males, minorities, and first-generation college students are challenging. Enrolling representative's students from a school's student body rarely occurs. Students who participate in dual enrollment programs are more often female, white, and have parents who attended college (R. Kemp, personal communication, January 18, 2013).

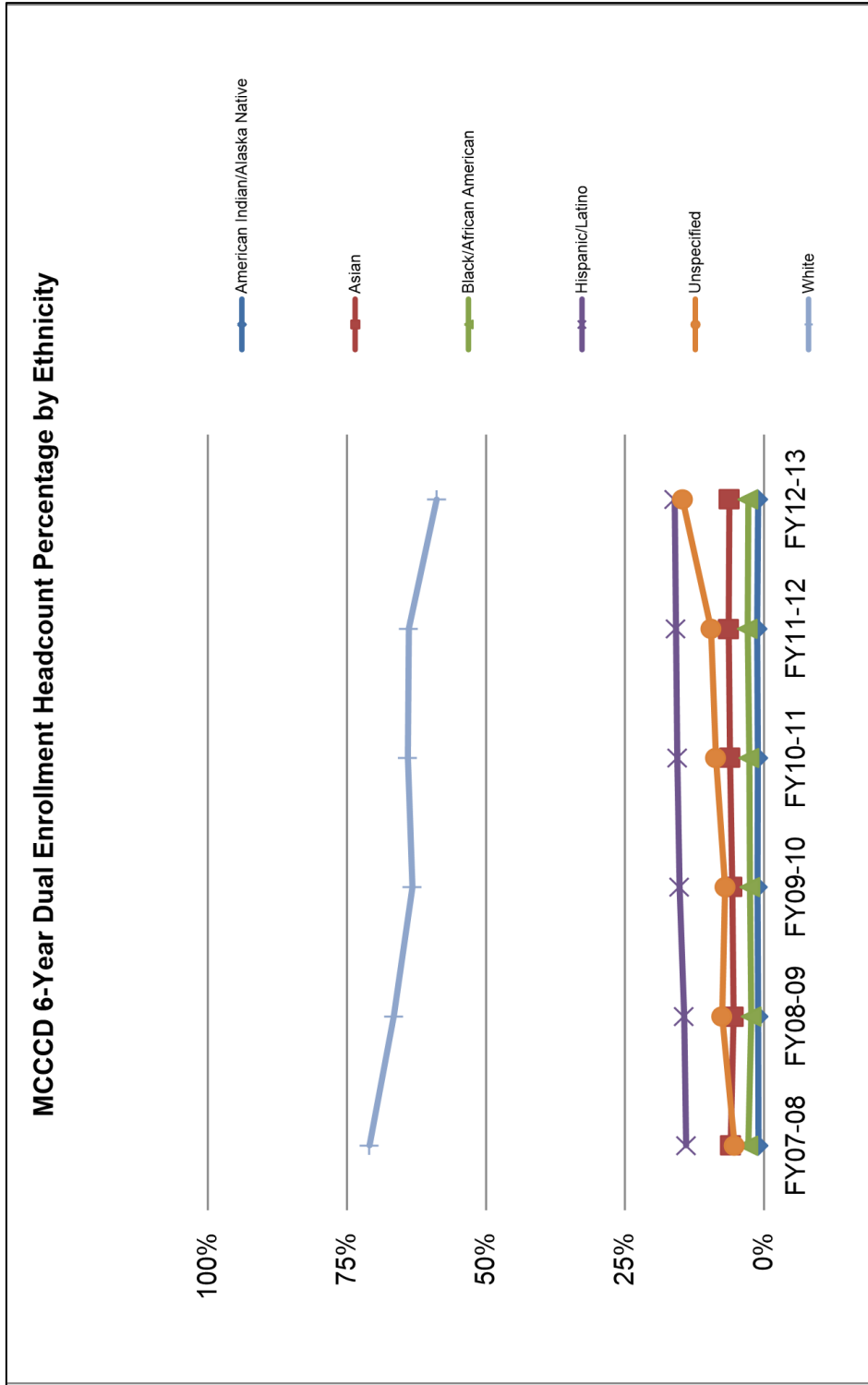


Figure 2. MCCCD 6-year enrollment headcount percentage by ethnicity.

Nationally, dual enrollment participation is challenging. In one study done in Florida for the 2006-7 school years, it was found that only 7.3% of the students in 11th and 12th grades participated in dual enrollment courses. The study, which included 98,395 students, also found women were more likely to enroll with 62% being female and 51% male students. Ethnicity also seems to be a factor as 72% of the students were white and 51% of the students were of a different ethnicity (Estacion, Cotner, D'Souza, Smith, & Borman, 2012).

In a study in Virginia, Black and Hispanic students are underrepresented in dual enrollment classes while female and white students are overrepresented (Pretlow & Washington, 2013). The Florida study also found that economics played a role in whether students participated in dual enrollment courses. Sixteen percent of the students who qualified for free or reduced lunch enrolled in dual enrollment courses compared to 31% did not qualify. The study also found that while participation in dual enrollment was only 7.3%, participation in AP, IB and AICE (Advanced International Certificate of Education) was 74% (Estacion et al., 2012). Southwestern Community College found that schools with the highest percentage of students qualifying for free and reduced lunch also had the lowest percentage of students who participated in dual enrollment courses (See Table 1).

Table 1

Comparison of Free/Reduced Lunch Participation With Dual Enrollment Participation

High School	% Elig. Free	% Elig. Reduced	% Elig. Free and Reduced	Total HS Enrollment	Total DE Enrollment 2011-2012	% Enrolled in DE
Corona Del Sol	6.16%	1.71%	7.87%	2580	456	17.67%
Desert Vista	3.14%	0.84%	3.98%	3089	924	29.91%
Marcos De Niza	29.69%	2.59%	32.27%	2011	170	8.45%
Mcclintock	31.64%	3.14%	34.78%	2007	138	6.88%
Mountain Pointe	11.15%	2.37%	13.53%	2824	457	16.18%
Tempe	59.77%	6.33%	66.10%	1643	37	2.25%
Dysart	55.34%	10.86%	66.20%	1574	99	6.29%
Shadow Ridge	26.52%	9.14%	35.66%	1203	17	1.41%
Valley Vista	40.40%	10.56%	50.96%	2188	94	4.30%
Willow Canyon	27.68%	8.72%	36.40%	1904	11	0.58%

Some studies claim dual enrollment programs along with other college outreach programs exclude minority students from participating. According to Pete Loza (2003) in his article “A System at Risk: College Outreach Programs and the Educational Neglect of Underachieving Latino High school Students,” Latino students who exhibit the most need are excluded from programs designed to increase college enrollment. “A college or university education is not easily accessible to all, especially to poor and minority students” (Loza, 2003, p. 43). For college outreach programs to work, Loza says the program must meet the localized needs by affirming their culture and identity. Most high schools are structured on a middle-class or higher orientation. Middle-class families and their children understand the cultural and social nuances (capital) of how they operate.

These students have an advantage as they understand and enter high school equipped with the necessary cultural and social capital to succeed (Loza, 2003, p. 46). While the middle class and higher children understand the rules, minorities and children of the poor, have to learn the rules and the rules are constantly changing, While schools are designed to allow all students the same opportunities to acquire the social and cultural capital needed to get ahead, not all of them attend a postsecondary institution, not all schools are created equal, says Loza. In fact the vast social and economic divisions present in U. S. society are the transmitted and found in schools (Loza, 2003, p. 47).

Qualified Teachers

In the Southwestern United States Community College finding enough teachers who qualify to teach dual enrollment classes is one of the biggest challenges. In schools with large populations of students qualifying for free and reduced lunch, the challenge is even more difficult. First-generation college students who have no background or understanding of college processes are an additional struggle (R. Kemp, personal communication, January 18, 2013). College knowledge also plays a role in whether students participate in college outreach programs. Loza found in a sample population of Latinos parents that “college knowledge was very limited. Parents surveyed in the study lacked even a basic understanding of college entrance requirements, financial aid, and scholarship attainment (Loza, 2003, p. 54).

Challenges of Implementation of Dual Enrollment Program

There are many challenges to implementing a dual enrollment program. Challenges include adequate funding and resources (Kim, 2012) and administrative challenges (Estacion et al., 2012). A Florida report cited administration of the program as the most common challenge for the implementation of a dual enrollment program (Estacion et al., 2012). High schools that offer dual enrollment courses must work collaboratively with a college. Registration and recruitment is a challenge as administrators and staff from two institutions must work cohesively together with a myriad of paperwork. Communication to parents, students, and teachers is also an obstacle to enrollment efforts. In Florida administrators used a variety of methods to inform parents including print materials, high school counselors, college recruiters at high schools, individual and group meetings, media, word of mouth, and promotion of the College Placement Test (Estacion et al., 2012).

Quality of Dual Enrollment Courses

The quality of dual enrollment courses is a hot topic of debate amongst colleges, faculty, and high school administrators. Colleges are reluctant to take college credits without verification of the same quality and rigor as classes that are located on the college campus. In the United States, 46 states have policies on dual enrollment but only 29 have provision for quality control. Only 15 states have policies requiring public colleges to accept dual enrollment credits while 18 states have no clear policy on the transfer of credits (Bahr, 2012).

In 1999 the National Alliance of Concurrent Enrollment Partnerships (NACEP) organized and began discussing the need for national standards and accreditation (Swanson, 2010). Southwestern Community College was one of the founding members of the organization and one of the first programs in the state to be accredited as well as one of the first programs to be reaccredited under the new 2010 standards (NACEP, 2012). National standards and the accreditation processes were developed over a number of years. Today there are more than 66 accredited programs and hundreds of members which hold a yearly conference. Programs which are accredited by NACEP must meet the standards in a variety of areas. Those areas include curriculum, faculty member selection, training support of faculty members, students' rights and responsibilities, student assessment, and program evaluation. Accredited programs must hold dual enrollment students to the same learning outcomes as those on campus and follow the same course competencies. Dual enrollment students must also be assessed the same way as students on campus (Swanson, 2010). According to NACEP standards, dual enrollment faculty must follow and meet the same standards as college faculty and must participate in professional development and be provided with ongoing support (NACEP, 2012). In the Arizona, state law requires that state universities accept all dual enrollment credits, but transfer outside of Arizona is based on the institution's policies. Dual enrollment offerings are also based on state and local laws and regulations. In the Southwestern United States Community College faculty heavily influence what classes can and cannot be offered for dual enrollment. Instructional Councils made up of representatives of all 10 Southwestern United States Community College District sister colleges make recommendations to the

district for the course catalog to be used for dual enrollment classes. The Economics Instructional Council in the Southwestern United States Community College District prohibits high school students from taking economic classes for dual enrollment credit (R. Kemp, personal communication, January 18, 2013). In a study completed in 2006 at Syracuse University dual enrollment student's micro/macro principles of economics scored better than students taking the class at the college. Using a sample population of 254 dual enrollment students the dual enrollment students performed slightly better (0.7 of a percentage point) than did AP or honors students taking economics. The dual enrollment students also performed over 4 percentage points better than did the AP/honors economics group in the knowledge area. In the application the dual enrollment students scored 0.3 percentage points higher and in the comprehension part of the exam the dual enrollment students scored lower than the AP/honors students (Dutkowsky et al., 2006).

Classroom Strategies for Dual Enrollment Classes

Maintaining college level instruction in a high school dual enrollment class is a challenge. Because dual enrollment courses are actual college courses that appear on a transcript the same way as other college courses as opposed to college level courses or curriculum such as advanced placement and International Baccalaureate programs, it is even more important to maintain college level instruction including standards, texts, and assessments. High school instructors often find it difficult to maintain college level instruction in a classroom of students with a broad range of academic skills. As part of an action research project a number of dual enrollment instructors teaching disadvantaged California High school students found a number of strategies that helped increase student

success. Two different challenges were addressed in the study. The first addressed the lack of academic skills. The second issue revolved around the student's adjustment to the college environment. Students lacked the ability to study outside the classroom and were deficient in class participation behaviors. They also needed better time management, stress management and note taking skills (Hughes, 2012, p. 31). While students who lacked either academic skills or behaviors struggled, those who struggled with both issues found it difficult to be successful. In the California research project instructors tried a variety of strategies to improve student success within the classroom. One strategy for improving student's ability to do well in the class was adding support structures outside the classroom. Faculty also found it was important to provide emotional support to students for classroom success. Classroom strategies that helped students become more successful included making learning student centered and using multiple student assessments (Hughes, 2012, p. 32). Another strategy for improving academic success in dual enrollment classes was implementing instructional scaffolding with a gradual reduction in support. This helped students be successful and academic support beyond the classroom improved students' ability to do well in the dual enrollment class (Hughes, 2012, p. 33). Other strategies that helped improve student success were the validation of students and fostering of personal and social adjustments of the rigors of the college classroom experience. Additionally, faculty found that making content meaningful for students also improved student success (Hughes, 2012, p. 34). While these strategies improved the success rate of dual enrollment classes the study provided insights from both sides. College professors learned to better understand the needs of matriculated students and

high school personnel found they had a better understanding of what their students needed to be successful in college (Hughes, 2012, p. 35).

Who Enrolls in Dual Enrollment Programs?

As dual enrollment programs across the country expand, there are different ideas regarding who should have the opportunity to participate in dual enrollment courses. In the past, dual enrollment programs were often offered to only those students who excelled above their grade (National High School Center, 2007). In Southwestern United States Community College District sister college have many faculty and administrators at both the college and high school level that continue to believe that dual enrollment courses are only for those students who are able and ambitious (R. Kemp, personal communication, January 18, 2013). However, today many educational leaders are looking at dual enrollment courses to benefit a larger pool of students and reduce the amount of remediation needed by students once they reach the post-secondary level (National High School Center, 2007).

Barriers to Enrolling in College

There are many facets to the question of who enrolls in college and why, why some drop out and others stay and graduate. Besides the question of college completion, it is also important to understand why some students never even attempt to enroll in college. According to some of the research and policy analysts “college knowledge” is a critical piece of determining who goes on to college and completes it. While many students drop out of college, many never attempt to enroll in college. “College knowledge” is defined as students knowing and understanding the complex process of enrolling in college,

including the admissions and selection process, available options to pay for a post-secondary education, the academic requirements for college-level work and even the cultural differences between secondary and postsecondary education. Students planning to complete a college education need college knowledge along with the development of a college going identity. Both these factors play a key role in helping students prepare and enroll in post-secondary education according to Sarah Hooker and Betsy Brand in the article “College Knowledge: A Critical Component of College and Career Readiness” (Hooker & Brand, 2010).

Students from underrepresented groups often lack the social capital to understand the world of postsecondary education, as they are less likely to have role models who have attended institutions of higher education and they may have less collective college knowledge in their communities. (Hooker & Brand, 2010, p. 77)

Another important factor influencing college enrollment is the culture of the high school. Students who attend high schools with a strong college-going culture are more likely to attend college (Hooker & Brand, 2010, p. 77). Programs such as dual enrollment and early college help students gain both college knowledge and the skills to be successful in post-secondary education. Students benefit from early college opportunities as they not only complete college level course work, they also learn to navigate college campuses, to understand the college structure, and to handle the demands of college life. First-generation, low-income, and disconnected youth all need help navigating the challenging road to college enrollment according to Hooker and Brand. Dual enrollment is considered an effective strategy in helping students gain “college knowledge” and to identify themselves as college going students (Hooker & Brand, 2010).

In Maricopa County there are thousands of high school students but only 16,000 students enroll in dual enrollment classes. This means only a fraction of students are participating in dual enrollment classes. In a report by Hahn and Price (2008), *Promise Lost: College-Qualified Students Who Don't Enroll in College*, the findings were similar to those of Hooker and Brand. According to Price and Hahn, barriers for college enrollment vary from insufficient financial aid to mixed messages about academic preparation. Students struggle with a poor understanding of the admission and financial aid process and limited community encouragement (Hahn & Price, 2008). Income is another factor that impacts enrollment rates. There is a huge difference in enrollment rates between low and high-income college-qualified students. Only 75% of high-ability students from low-income families enrolled in college compared with 95% of students with high-ability and high-income families. Eight years after high school graduation 99% of high-achieving, high-income students had enrolled in college while only 75% of high-achieving, low-income students enrolled. These findings suggest that non-academic barriers prevent a large number of qualified students from attending college (Hahn & Price, 2008).

Ethnicity also plays a role in whether students enroll in college. In the study group of non-college-goers, minorities were disproportionately represented with 52% White, non-Hispanic and 48% Hispanic, Black Asian, or American Indian. Non-college goers are more likely to be Black (29%) than college-goers (21%). Additionally income plays a role in whether students attend college. More than one third of students who received free or reduced lunch are non-college goers (Hahn & Price, 2008). Southwestern Community

College found that schools with the highest percentage of student participation in free and reduced lunch also had the lowest percentage of students who participated in dual enrollment courses (see Figure 1 presented previously).

The education status of parents also has an impact on college enrollment. Lack of effective communication was another barrier to qualified students enrolling in college according to a study done by Hahn and Price. One participant of the study said, “Poor people get the least quality of information, they get it last, they get it in the most distorted forms, and oftentimes from sources they’re not comfortable with” (Hahn & Price, 2008, p. 17).

Summary

Dual enrollment is an important strategy in the fight to improve college completion and retention rates. There are many important benefits for students who participate in dual enrollment opportunities. The benefits include increasing rigor in the classroom, increasing the range of courses and electives, introducing college expectations, making education more relevant and interesting, and reducing the cost of a college education. Students who participated in dual enrollment courses are more likely to graduate from college, have higher grade point averages, and better understand the challenges of college course work. But while there are many benefits for enrolling in dual enrollment course work, many students do not participate in dual enrollment programs. Gender, race, economics, the culture of the high school, and the educational attainment of the student’s parent’s impacts whether students enroll in dual enrollment courses. Students enrolling in dual enrollment classes are more often female and white. There are more white students

and more female students that participate in dual enrollment programs across the country. As college and high school administrators establish and promote dual enrollment programs at the local and national level, it is important to understand the barriers and obstacles to enrolling in a dual enrollment program.

Chapter 3: Research Design

Restatement of the Purpose

The purpose of this qualitative study is to identify obstacles and barriers for high school students to enrolling in Southwestern Community College dual enrollment classes. This study tried to answer the questions of what motivates students to participate and what are barriers and obstacles that keep students from participating in dual enrollment courses. This study was designed to identify if gender, ethnicity, social class, and the culture of the high school affect dual enrollment rates of participation. By examining and determining what kept students from enrolling as well as what motivates students to participate, high school and post-secondary institutions will be able to address and alleviate barriers and obstacles to dual enrollment.

In the Southwestern United States Community College, there are dozens of high schools that currently have dual enrollment programs. Some high schools have flourishing programs with hundreds of students while others have very small programs with minimal participation. This study was designed to try answer the question of why some students sign up for dual enrollment courses and some fail to participate. It also looked at what high schools with the most successful programs in the state do to be successful and why there is such a disparity in enrollment numbers among high schools. This study tried to answer the following research questions.

1. Are students and parents aware and informed of dual enrollment opportunities at their high school? Is communication or lack of information about dual

enrollment opportunities a significant barrier to participating in dual enrollment courses?

2. Who are the decision makers when it comes to participating in dual enrollment classes--parents, students, counselors, administrators, peers?
3. What is the biggest obstacle to enrolling in a dual enrollment class—lack of information and communication about the program, lack of understanding of the benefits, registration difficult to understand, lack of teacher interest?
4. What is the biggest motivator in students participating in dual enrollment classes?
5. Does economics or social class impact participation in dual enrollment? Is there a correlation between dual enrollment participation and participation in the free and reduced lunch program?
6. Does ethnicity and gender impact dual enrollment rates? Are there more females enrolled and less males students? Do more students who are White enroll than those of a different ethnicity?

Research Design

This study was a qualitative study to identify barriers and obstacles for students to enroll in dual enrollment courses (Creswell, 2003, p. 100). According to Glesne (2011), there is a difference between methodology and methods. Methodology means “a theory of how inquiry should proceed. It involves analysis of the assumptions, principles and procedures in a particular approach to inquiry” (p. 14). Glesne goes on to say that “Methods is the procedure, tool, or technique used by the inquirer to generate and analyze

data” (p. 14). While combining two different methodologies in a study does not work, combining quantitative and qualitative methods or techniques in a study can be done successfully. Sometimes one method tends to be supplementary to the dominant mode of gathering data (Glesne, 2011). In my study, I used a qualitative approach. Glesne says a researcher’s particular approach will depend on their personality, background, values, and who they believe is important to know about the world around them. I chose to look at students, parents, counselors, teachers, and administrators. I felt the all had different perspectives and to get the true picture of what dual enrollment is and what are the barriers I needed to look at all of the pieces. While quantitative studies identify sets of variables and seek to determine their relationships, qualitative studies are best at contributing to a greater understanding of perceptions, attitudes, and processes, says Glesne (2011, p. 39). Perceptions and attitudes were very important in my study. It was interesting to see how different the perception counselors, administrators, parents, and teachers had. Without looking at the entire mix, I would failed to get the complete picture. With nearly 100 student surveys, I was able to look across the board at numeric trends along with the attitudes and perceptions of the participants. Broad numeric trends along the details of the qualitative research gave me a better understanding of my study (Creswell, 2003, p. 100). In my study, the student survey with its large numbers helped me to hone in on my focus group and develop better questions for more reliability and validity. In my research study I used what Glesne terms a “backyard research.” Doing backyard research has a variety of appeals. Backyard research gave me easy access since I live and work in the same metropolitan area. Additionally, I already have relationships with the high schools I

surveyed and the research was helpful in my current position as director of community partnerships overseeing the early college department. Finally, “backyard research” helped reduce the amount of time and money needed to complete the study. For my “backyard research” I used two high school districts with which Southwestern Community College currently partners. Both school districts are located in a large metropolitan area and have been the community college partners for a number of years.

Researcher’s Perspective

As the Director of Early College for Southwestern Community College, dual enrollment is very important to me. It is also important to high schools, colleges, and parents. Most high schools, colleges, and parents are aware and understand the advantages dual enrollment classes give students. So not only was this topic of interest to me, it is also of interest to many others. Glesne warns researchers that while a passion for the chosen topic is important, the research should not be so specific that only the researcher is interested in the results. As I did my research, I found many participants were enthusiastic to share the perceptions and also eager to see the results. In some cases participants seemed eager to vent their frustrations with the systems. Parents and counselors seemed the most passionate about their perceptions. Parents who felt their child should have been able to participate and whose school did not offer the same advantages of another high school which had more course offerings, were the most intense.

Glesne also urges researchers to be careful to not be over-involved in the subject. Emotional attachment may keep a researcher from having an open exploratory learner’s attitude. An open exploratory learner’s attitude is important for good data collection and

analysis (Glesne, 2011). I tried very hard to not become emotionally attached. It was difficult in the focus groups to not correct misconceptions of the program. It was also surprising to learn the students in the honors track have an advantage in the number of dual enrollment courses they make take compared to students in the regular track.

Population and Sample

My target population is all high school students in the Southwestern United States Community College in the community college metropolitan area who have the opportunity to take dual enrollment classes. Many high schools across the state offer dual enrollment opportunities. These high schools range in size from less than 100 students to more than 3,500 students. Some of the high schools are in very affluent areas where parents are well-educated and have good-paying jobs. These schools have very few students who qualify for free and reduced lunch. Other high schools have more than 50% of their students who qualify for free and reduced lunch. The schools also vary in ethnicity. Some have large populations of White students while others have more diversity in their population. My two high schools varied in size and demographics. Both high schools in my study had similar student populations. The two high schools also had similar demographics.

Interestingly I tried to survey students on income but decided not to use the results and there were large numbers of students who did not know the income of their parents.

I used a sample population in my study. There are four major reasons I chose to use a sample population. The first is the cost. It would be very difficult to include all high schools students in the metropolitan area in my sample. Additionally studying all students may produce errors and a sample population may be more accurate. The return rate at my

two high schools was very different. At D High School I sent informed consent letters to 100 students. I received 76 back. At the second school, C High School I surveyed 100 students and got 21 back. I went back to try to obtain more participants. I added an additional two surveys. I attempted a third time and I didn't receive any surveys back because students did not return their informed consent form. The first part of my study was the student survey. I surveyed students currently in dual enrollment classes, students not in dual enrollment classes, and students ranging in grades from 9-12. Since most research situations are too vast to interview everyone or observe everyone, researchers need a justifiable selection strategy by which to choose people, events, and times. "Random sampling the strategy often used in quantitative research is appropriate for selecting a large statistically representative sample from which generalization can be drawn" (Glesne, 2011, p. 44). Patton (1990) identifies 16 different purposeful sampling strategies.

- Extreme or deviant case sampling—select cases from the extreme cases that are unusual or special in some way;
- Homogeneous—selects all similar cases in order to describe some subgroup in depth;
- Maximum variation sampling—selects cases that cut across some range of variations, searches for common patterns across great variation;
- Theoretical sampling—selects cases, people, events, activities through evaluating theoretical constructs;

- Snowball, chain, or network sampling—participants are selected by people who know people who meet what the researchers looking for;
- Convenience sampling—selects cases based on convenience, but has low credibility and is inappropriate for anything other than practice;

My target population included all possible dual enrollment students, parents, teachers, and administrators in a Phoenix metropolitan area. My sample size would be a random selection of possible students, parents, teachers, and administrators in two high schools. My sample size did not include extreme or deviant case samples. I wanted to get as good a mix of gender, ethnicity, income, education etc. as possible. I did not use snowball or chain sampling as it would give me a tainted sample.

Institutional Permission and IRB

Because this research study includes high school students, I was required to get Institutional Review Board (IRB) approval from both the Southwestern Community College District, the organization with which I am affiliated, and with the school districts in which the two schools are located and the college. Both the Southwestern United States Community College District and the school districts had specific processes that I was required to adhere to in order to obtain permission to survey and interview students. Both Southwestern United States Community College District and NAU's IRB are designed to protect human subjects in research studies that involve living human beings as participants. In Southwestern United States Community College District the IRB reviews all proposed research subjects to ensure subjects are treated ethically and that their rights and welfare are adequately protected. In Southwestern United States Community College

District the IRB is composed mostly of faculty members from disciplines in which research involving human subjects in a major part of their discipline. Written approval must be received before research can begin from both Southwestern United States Community College District and NAU. NAU requires students who are involved in research studies to take the required IRB training and pass it (Northern Arizona University Research Compliance, 2013). NAU has a three step process.

Instrumentation

My research was a qualitative study including focus groups and surveys. The converging or triangulation of both the survey and focus group data helped me better understand the research problem and ensured the validity of the data. I developed a survey instrument to question students at both high schools to discover and explore participants' attitudes, views, and ideas on dual enrollment (Creswell, 2003, p. 100). Using the data gathered in the first phase of my study, I developed a second survey instrument which was used to gather in-depth responses through interviews and focus groups. This followed the initial survey and helped add depth and description to data. According to Glesne (2011), if focus group participants come from the research site and know that their goal is to help create the research design they can help the researcher to learn about the language, norms, and customs. Focus groups can also help with participation selection and data collection strategies. The use of focus groups should be determined by how easily and actively the participants can discuss the topic (Glesne, 2011, p. 131). I felt dual enrollment is a subject that can easily be discussed by participants of a focus group. A focus group was held at each high school. The group consisted of parents, administrators, counselors, and teachers.

Both the survey and focus group were held at the high school so participants would feel at ease and comfortable. The focus group relies heavily on the moderator according to Glesne (2011). As a former journalist, I have more than a decade of experience interviewing subjects, and I believe I am fairly skilled in this area. My goal was to stimulate a healthy discussion of the focus group using a series of questions I developed. Typical focus groups according to Glesne start with each participant answering questions so participants become comfortable speaking with one another (Glesne, 2011, p. 131). In the focus group, it was vital I ask open-ended questions and used in-depth probing so that I obtained in-depth answers (Glesne, 2011, p. 134). The focus group questions were semi-structured which allowed me to start with basic questions on barriers and obstacles for enrolling in dual enrollment classes. Topics covered in the interview included the cost of enrollment, ethnicity, gender, leadership, culture of the high school, college knowledge, communication, parent involvement in the decision to enroll or not enroll, and counselor impact. I started the focus group interviews with questions about what they knew about dual enrollment before moving on to questions that are more sensitive like tuition and ethnicity (Dereshiwsy, 2011). One surprising answer was, “What don’t I know about dual enrollment,” said a participant. I also was flexible enough if the focus group discussion moved in an unanticipated direction I was able to follow that lead. One unanticipated direction my focus group took was the reluctance of high school counselors to advise students when large sums of money for tuition was involved. Another unanticipated area my focus group was a participant’s own personal experience with her daughter. She regretted her daughter participating in dual enrollment because she

graduated from college a year early and joined the workforce before the counselor thought she was ready.

The initial survey distributed to student participants included an informed consent letter and instructions explaining the process so that all students received the same instructions. The survey included questions that were answered by checking the most appropriate response category along with a five point Likert scale ranging from *strongly disagree* to *strongly agree* and with a neutral or balancing point. The informed consent letter explained the purpose of the study, what the results were used for, and a deadline for completing the survey. The questionnaire was field tested to establish face validity and improve questions format and scales (Creswell, 2003). In the field test I surveyed a group of students. After the students completed the survey I interviewed the group on the survey. I found that several questions were not easily understood and I revised the questions.

Data Collection and Analysis

The survey did not take place until the students had returned the informed consent form. This was one of my biggest challenges. At D High School students the return rate was very high. Only a couple of students in each class failed to return the informed consent form. At C High School I had entire classes that failed to return the informed consent form. At D High school the assistant principal was very involved with asking teachers to have their classes participate. At the second high school the assistant principal asked the teachers to be involved. This may have been why the survey return rate was so low at the second high school.

I visited both high schools to collect the surveys. Data collected from the surveys were tallied, and students' comments were compiled. Focus groups were recorded and transcribed. Once they have been transcribed, I looked for themes and patterns and began developing a code Glesne (2011) calls this analysis thematic. Using this method I read through all the pieces of data coded the same way and looked for categorization or themes. Data analysis is when you organize what you have seen, heard, and read so you can figure out what you have learned according to Glesne. In data analysis I described, compared, created explanations, and developed theories (Glesne, 2011). Initial data gathered from my survey helped shape and develop my focus questions. I did my data analysis and data collection at the same time (Glesne, 2011).

Phase I of my study was the survey to students. Phase II of my study was the focus groups and additional interviews to gather in-depth data. In Phase I surveys were distributed to students during class. A protocol was established with instructions on how the surveys were to be introduced and the directions for responding. Surveys were collected by teachers and returned to me. I used several steps in my data analysis. First I reported the number of returns and non-returns of the survey. This information is presented in a table form with special attention to the number of respondents and non-respondents. The second step discussed the method by which response bias was determined. Response bias is the effect of nonresponse on survey estimates. This procedure looks at what influences non-respondents had on the survey if they would have responded. This could substantially change the results of this survey. Since surveys were distributed at the same time I did not consider a wave analysis which means results could

be impacted by time. I used descriptive language in compiling my results. Survey answers were compiled using percentage of students who answered the question in that way

Limitations

Since this research was conducted in a large urban county in the southwestern United States, the results may not apply outside the state. The southwestern United States have some unique characteristics regarding education and dual enrollment programs may run differently in different part of the country. Perceptions of the program may vary in other regions of the country. In Phase I of my study I used a survey instrument to gather data and to help me formulate and develop questions for Phases II of my study. Both Phase I and Phase II included participants from two high schools. Individual students may have positive or negative experiences with dual enrollment which may impact how they answer the survey questions. Since this survey took place in the southwestern United States area, it may not apply to other parts of the country. This survey took place in the 2014 school year and reflects the attitudes and views of students at that time. Attitudes about dual enrollment may change over time.

In Phase II the focus groups have advantages and disadvantages. Allowing me to interact with participants allowed me to obtain greater detail and understanding as I was able to probe participants for more detail and additional information. It also allowed me to control the questions. This is also a limitation as the information was filtered through the views of the participants. Since a focus group interview is not a natural setting, this may have restricted the comfort of participants in answering questions. My bias may also have intervened with the way questions were asked or perceived by participants. As I oversee

the dual enrollment program, participants may have answered my questions differently than they would if the interviewer had no relationship with dual enrollment. I may have also influenced the data by inadvertently looking for more information that relates to my personal feeling on dual enrollment. Additionally all participants were not equally articulate and perceptive (Creswell, 2003, p. 184).

Research Questions

1. Are students and parents aware and informed of dual enrollment opportunities at their high school? Is communication or lack of information about dual enrollment opportunities a significant barrier to participating in dual enrollment courses?
2. Who are the decision makers when it comes to participating in dual enrollment classes--parents, students, counselors, administrators, peers?
3. What is the biggest obstacle to enrolling in a dual enrollment class—lack of information and communication about the program, lack of understanding of the benefits, registration difficult to understand, lack of teacher interest?
4. What is the biggest motivator in students participating in dual enrollment classes?
5. Does economics or social class impact participation in dual enrollment? Is there a correlation between dual enrollment participation and participation in the free and reduced lunch program?

6. Does ethnicity and gender impact dual enrollment rates? Are there more females enrolled and less males students? Do more students who are White enroll than those of a different ethnicity?

Chapter 4: Findings and Results

Introduction

This chapter presents the finding and results of a descriptive qualitative study designed to identify barriers and obstacles for high school students participating in dual enrollment courses offered by Southwestern Community College. The study consisted of two parts, a student survey and focus group of parents, teachers, counselors, and school administrators. Students were surveyed at two southwestern United States high schools, both in a large metropolitan area. The two high schools were in the same school district. The high schools were large comprehensive schools, with a long history of participation in dual enrollment courses.

The survey was distributed randomly to students ranging from grades nine through twelve. The survey consisted of 21 questions. Survey questions consisted of five point Likert scale items to be ranked in importance and selection of the best answer including *other*. Student participants were required to sign an informed consent form along with their parent or guardian. The second phase of the study consisted of two focus groups, one at each high school. The focus group included parents, teachers, administrators, and counselors. The focus group discussions were recorded and transcribed. The findings and results are presented under each research question studied.

The first research question is, Are students and parents aware and informed of dual enrollment opportunities at their high school? Is communication or lack of information about dual enrollment opportunities a significant barrier to participation in dual enrollment courses?

The first topic in the research study revolved around awareness of dual enrollment opportunities at the high school. Are students informed and understand what dual enrollment is and how it works? Is communication or lack of information about dual enrollment opportunities a significant barrier to participating in dual enrollment courses.

In the southwestern community college where the study was held, there were 16,273 students participating in 2012-13 school year. This is up from enrollment of 14,322 in the 2007-08 school year. Students who participate in dual enrollment classes do well in the 2012-13 school year; Ninety-five percent of the students earned a grade of A, B, or C, while 49% of the enrollments received an A grade. While nearly 99% of the students indicated they plan to attend a university in the 2011-12 school, 44% of the students attended a community college within the southwestern community college district. The two high schools who participated in the study were the two highest headcount numbers of high schools in the district. The first high school had a headcount of 1,086 in the 2012-13 school year and the second high school to participate in the study had 608 students.

The research findings show that awareness of the program is strong, but the understanding of the program and communication about dual enrollment opportunities is a significant barrier. According to the findings, 96% of the students responded they were familiar with the dual enrollment program on the campus selecting “strongly agreed” or “somewhat agreed” on a five point Likert scale with the statement, “Are you familiar with the dual enrollment program on your high school?” Only 5% of the participants had no

opinion, and there were no students selecting the “slightly disagree” or “strongly disagree” answer at either high school.

The second question in the survey, “Do you believe the dual enrollment program on your high school campus is beneficial for students,” also received strong positive response. Ninety-six percent of the students surveyed selected “strongly agree” and “somewhat agree” to that statement. Students were less favorable to question number three which stated, “Are dual enrollment credits earned on your high school campus the same credits you would earn at the college?” The largest number of students picked “somewhat agree” to the statement. D High School had 55% of the respondents selecting “somewhat agree,” and 48% of the respondents at C High School made the same choice. Only one student selected the least favorable response of “strongly disagree,” stating “I think it is ridiculous. It’s lame. Dual enrollment is only for in-state colleges and in-state colleges are bad.”

Tables 2 through 4 show the distribution of the data for the first three questions on the student survey.

Table 2

Responses to Student Survey Question: Are You Familiar With the Dual Enrollment Program on Your High School?

	Strongly Agree	Somewhat Agree	No Opinion	Slightly Agree	Strongly Disagree
D High School	61%	34%	5%		
C High School	71%	29%	0%		
C & D total	63%	33%	4%		

Table 3

Responses to Student Survey Question: Do you believe the dual enrollment program on your campus is beneficial for students?

	Strongly Agree	Somewhat Agree	No Opinion	Slightly Agree	Strongly Disagree
D High School	66%	29%	5%		
C High School	57%	43%	0%		
C & D total	66%	33%			

Table 4

Responses to Student Survey Question: Are dual enrollment credits earned on your high school campus the same credit you would earn at the college?

	Strongly Agree	Somewhat Agree	No Opinion	Slightly Agree	Strongly Disagree
D High School	32%	55%	9%	3%	1%
C High School	38%	48%	4%		
C & D total	30%	48%	7%		

Focus group participants at both schools echoed the responses of students. Participants said the schools do an exemplary job of communicating and informing students and parents about dual enrollment opportunities at their school. “I just felt like our school does a really good job with the promotion and the marketing and the communication,” commented one focus group participant from D High School. The two schools hold special meetings on the topic and the college representative attends open houses, curriculum nights, and spends three days at the school doing registrations. The schools also send constant updates about the dual enrollment program through the school portal. “Every day you get the Daily Fusion and Daily Digest and it [dual enrollment] is all over the place,” said a parent. “I think we put out all kinds of information, fliers, announcements, teachers talk about it, we talk about it at the open house, and it’s on our website. They get a lot of information about it,” said a C High School participant.

At D High School, focus group participants said not only does the school communicate and inform parents about dual enrollment opportunities, they insist the school has developed a culture of dual enrollment. Support of the program begins at the top with the principal and goes all the way down. “Everyone has just bought into it and supports it,” said the assistant principal of D High School. The principal at D High School has embraced and drives it according to the focus group participants. Both focus groups reported schools without principal support do not have successful dual enrollment programs. “The principal definitely needs to make it a priority as well,” commented the assistant principal who said she had talked to other teachers who struggle to get support for dual enrollment at their school. D High School’s principal is an avid proponent of dual

enrollment and has been at the school for nearly 10 years. C High School has had three principals in the same time frame and that has impacted the success of the program, said a C High School focus group participant.

Even parents are part of the culture that embraces dual enrollment at D High School. “Our population just really values education and stays very informed,” said the assistant principal. Incoming ninth graders are introduced to the dual enrollment culture early. More than 50 parents of incoming freshmen showed up for a dual enrollment meeting. The community college representative also plays a vital role in the support of the program. “He is absolutely excited about it and is a total salesman. It doesn’t matter if it’s a nighttime function, whatever, he never hesitates to come out”, said one counselor. The dual enrollment culture is so strong counselors said when they delayed registration for a couple of weeks this past fall, they were bombarded with parents concerned they had missed the dual enrollment registration. “People look at it and are aware of it because it’s happened that way every year for many years,” said a teacher. Informational meetings on dual enrollment start as early as middle school. Flyers are sent home and the high school starts talking to them and preparing them for high school. “It’s brought up in just about every venue that we can,” said the assistant principal. Dual enrollment is on the school website, in the course catalog and handbook, and even presented at curriculum nights. School officials believe if students do not participate in dual enrollment courses, it is a choice they have made; it is not because they are not informed.

Although students are familiar with the dual enrollment program, communication seems to be one a major obstacle in having students participate in dual enrollment courses.

Forty-three percent of the students surveyed said that the lack of information and an understanding of the benefits was the biggest reason students did not participate in dual enrollment courses. C High School students also cited the cost of dual enrollment classes as big a reason students don't participated in dual enrollment courses. Cost was also a factor for D High School, but not as important for C High School students. Lack of information on how to register and the difficulty and complexity of the registration proves also was a factor students complained about often.

Student's written response substantiated the data that "lack of information and understanding the benefits of dual enrollment," is a barrier for students to participate. One student wrote, "Too busy—didn't hear about it till the deadline was almost here." Another claimed, "I learned about it too late and I didn't think it mattered." Students who did not enroll in dual often regretted their decision. One student wrote, "I didn't prepare for it, I wished I did dual enrollment though." Another wrote, "Didn't really know what it was or how it benefited." One participant said she had never seen a comprehensive list of what was offered for dual enrollment at the school. "I have shown up for class not knowing dual credit was an option until the teachers passed out the forms," she wrote. High school staff agreed registration can be a barrier. "Yeah, it can be confusing and frustrating to a lot of parents," said a C High School participant

College knowledge seems to also have some impact on students as to whether they enroll in dual enrollment classes. One survey participant indicated she was a senior but had never taken a dual enrollment class. The student indicated neither parent had graduated from college or taken any college classes. The student also indicated the family

income was less than \$30,000. Her response to the survey was, “She did not know there were dual enrollment classes at her high school, her teacher did not talk about dual enrollment in her class, the information on dual enrollment was hard to understand and difficult to follow and her parents did not know about dual enrollment opportunities at her high school.” Research has shown first-generation, low-income, and disconnected youth struggle with the complex process of college registration and admissions (Hooker & Brand, 2010). Without parents to guide and direct students through the complex process, many students forfeit the chance to take college classes. This was a first-generation college student who had difficulty registering and participating in college classes on the high school campus.

Accurate information seemed to also be a barrier for participating in the program. Transferability of dual enrollment credits especially for out-of-state colleges, was cited often. “Everyone knows about it, I just don’t know how my credits will transfer,” wrote one student. Additionally figuring out whether a class was needed for major seemed to be a challenge. “Students don’t take dual enrollment classes because they don’t know if the credit is going to help toward a chosen degree,” wrote one student. Another penned, “It cost a lot, we are unsure if the credits will transfer.”

Advanced Placement classes were also a barrier for students participating in dual enrollment courses. Many students did not understand the differences or had incorrect information regarding the differences between AP and dual enrollment. “AP classes look better on the transcript to out-of-state schools,” wrote one student. Another wrote, “It does not transfer. AP is superior.” Still another commented, “The majority of colleges

won't take dual enrollment credit so it is pointless.” And another wrote “...know the AP test would cover it,” so she did not enroll in dual enrollment.

Table 5

Responses to Student Survey Question: What Do You Think Is the Biggest Reason Students Do Not Enroll in Dual Enrollment Classes:

	D High School	C High School	Total
Lack of information and understanding of the benefits	32%	33%	43%
Lack of information on how to register	22%	14%	28%
Difficulty in registering	11%	9%	14%
Cost of participating in dual enrollment	26%	33%	36%
Other	9%	14%	14%

Students also responded overwhelming negatively when asked, “Do you think your school educated students and parents adequately about dual enrollment classes.” More than half the students at D High School cited “The information is hard to understand and difficult to follow.” Students found the information confusing and scarce. Students said there was an absence of information, information was confusing, and “students did not hear enough about it.”

The surveyed students and focus group participants did not have the same responses about the dissemination of information. Teachers, parents, counselors, and

administrators report information on dual enrollment is widespread but registration is difficult, complicated, and students struggle to complete the process. Student's under-age status, the lack of online registration process, and the massive amount of paperwork required, all create barriers for enrolling. Additionally, the lag time created by the lack of an online submittal also creates a barrier for students enrolling in dual enrollment classes. Registration can take weeks and students are confused what they should be doing. "There's a huge lag time between when our families turn in the paperwork and when it actually shows up on their computer in their student's center. We have a lot of confusion," said a counselor.

Students also have difficulty with the paperwork proving citizenship and understanding pre-requisites that are needed for some classes as well as the student user name and student ID. The two websites the community colleges students are required to go on also makes it difficult to figure out how to register, focus group members commented.

Testing is also a challenge. Students enrolling in math and English classes must take a college placement test before they can sign up for the class. Identifying students, finding that time and space, and coordinating the testing of hundreds of students is difficult. Furthermore preparing students to take the placement test is also an obstacle. Students must get admitted to the community college before taking the placement test. "They don't seem to understand," said a staff member that spends hours helping students complete the paperwork so they can take the placement test. "I can't tell you how many times I have to sit down and help a student get their account," said the staff member.

Advising students is an additional barrier for students. Counselors are not comfortable advising students who are spending large sums of money on classes on classes counselors don't know if they need or will transfer to the student's college of choice. "We're able to advise them but they want concrete answers and there aren't any," said a counselor. "Parents want us to advise them on should they take this; should they take that and it's different depending on where your student goes to college and what they choose to study." Counselors are also fearful parents will come back and complain if classes don't transfer or are not needed for the student's major, "I had a parent come back and say my student should not have done this...because it didn't count as a math class at the University for an Engineering Degree. We do have parents that will get upset with us..."

The cost of the dual enrollment program paired with the advising issue is also a challenge to school staff. "But when you see a check for \$1,700 cross your desk and the kid's in high school you're wondering are they really thinking though this process? Are they really getting what they need for the future and is it a good deal for them? I don't want to make that call for them," said a counselor.

One counselor whose daughter participated in dual enrollment and graduated from college a year early said she "regrets it big time." Not only did the daughter graduate from college before she was mature enough to enter the workforce, but she also paid for credits she would not have had to since she attended college on a full-ride scholarship. Another counselor said she was concerned about students earning an Associate Degree and starting as an 18 year old junior. "I had a student in my office the other day and she's

a sophomore and they want to plan for an A. A. and I just said what your hurry is? Then she'll only have two years in college. I said she'll go in as a junior? Are you ready for your 18-year-old to be a junior going with all the classes required for your major," said the counselor. Communication, registration difficulties, advising, testing, and the maturity of students all seem to create obstacles for students participating in dual enrollment opportunities.

Table 6

Responses to Student Survey Question: Do You Think the School Educates Students and Parents Adequately About Dual Enrollment Classes?

	School D	School C	Total
No, I did not know there were dual enrollment classes at my school	9%	0%	7%
No, my teacher did not talk about dual enrollment in my class	9%	0%	7%
The information is hard to understand and difficult to follow	52%	36%	48%
My teacher did not encourage me to enroll in dual enrollment	4%	0%	3%
My parents did not know about dual enrollment	26%	36%	28%
Other	0%	28%	28%

The second research question is, Who are the decision makers when it comes to participating in dual enrollment classes--parents, students, counselors, administrators, peers?

Who are the decision makers when it comes to dual enrollment participation?

Who decided dual enrollment courses are right for the student? Is it the student, counselor,

parents, administrators, or peers? According to student responses, parents and teachers are most influential when it comes to signing up for dual enrollment opportunities. A majority of students selected teachers and parents at D High School, but at C High School the most popular answer was the students themselves made the decision. Fifty-two percent of the students at High School C said they made the decision. Teachers and parents also were popular choices at C High School for impact on the decision to take dual enrollment classes. Focus group participants said most teachers do a good job talking about dual enrollment. Teachers find the dual enrollment program “meaningful” and work hard to educate students about the program, according to one teacher. Teachers also responded that reputation of the teacher and trust developed between the student and the teacher makes an impact on whether the students enrolled in dual enrollment courses or not. “I believe it really comes down to the teacher and the trust formed with the student/family.”

Counselors had very little impact on whether students enrolled in dual enrollment, and school administrators were not cited at all. Although school personnel reported the schools do a good job educating parents, the counselors admit their caseloads are too big for them to reach every student. “We have a bunch [referring to parents meetings] but with our caseloads we can’t possibly explain that to every single parent and even though we have parent’s nights and we explain things it is very individualized,” said a counselor. Peers also have very little influence in the decision making process. Only 3% of the students said peers influenced their decision.

At C High School there is concern the decision to participate in dual enrollment is not made by students, teachers, parents, or administrators but by students’ academic

placement. In some dual enrollment classes only honors students can participate. Teachers are the gate keepers and students in honors classes must have a teacher sign off that they are ready for the next level. Parents say more students would participate in dual enrollment courses if they were open to everyone and the general population of students would benefit from taking dual enrollment classes. “If you are not in honors classes you cannot get an associate degree,” complained one parent.

Table 7

Responses to Student Survey Question: How Did You Hear About Dual Enrollment Classes?

	School D	School C	Total
Teacher	55%	100%	84%
Parents	9%	14%	21%
Counselor	14%	38%	22%
Principal	27%	5%	4%
Peers	19%	42%	36%
I have never heard anything about dual enrollment at my school.			

Table 8

Responses to Student Survey Question: Who Was the Most Influential in Your Decision to Enroll in Dual Enrollment Classes?

	School D	School C	Total
Teacher	35%	33%	33%
Parents	35%	33%	33%
Counselors	4%	38%	35%
School Administrator	0%	0%	0%
Peers	1%	10%	3%
You made the decision yourself.	25%	52%	31%

What is the biggest obstacle to enrolling in a dual enrollment class—lack of information and communication about the program, lack of understanding of the benefits, registration difficult to understand, lack of teacher interest? Even if students are aware of the program, there are still obstacles to enrolling. They include costs of tuition for the courses, the difficulty to understand the complicated registration process, and the lack of accurate information about the course work. According to the students surveyed, the top reason for not participating in dual enrolment courses was lack of information and an understanding of the benefits. Ironically, teachers and staff believe students are given more than enough information. But cost was also a significant barrier for students to enroll as 26% cited costs as a challenge. Dual enrollment is a financial hardship for some students even though the school is located in a mostly affluent area. Students come from outside the

school boundaries, and there are struggling families living within the boundaries. Focus group participants at C High School also cited costs as a barrier for students participating in dual enrollment classes. “I think it is the cost. If you have more than one students or students are participating in sports...,” said a teacher. Lack of information on how to register was also cited by 22% of the students. So while the program may get lots of publicity, there are still a number of barriers that keep students from participating.

What is the biggest motivator in students participating in dual enrollment classes?

The research study also focused on motivation. What motivated students to enroll in college and high school classes at the same time? The number one reason students cited was to earn college credit with 58% of the students selecting college credit for their answer. Earning college credit seemed to be more than twice as popular as weighted grades and the third most popular answer for students to enroll was to save time and money. School personnel responded much the same way as students citing the ability to earn college credit as high school students was an important motivator for students to participate in dual enrollment opportunities. Parents say students really like to get their math and English credits out of the way before starting college. They also benefit from experiencing some college while in high school and dual enrollment courses may help direct them in some career choices.

Table 9

Response to question: If You Participated in Dual Enrollment When It Was Offered, What Were Your Reasons for Participating?

	School D	School C	
Earn College Credit	52%	71%	58%
Save Time and Money	19%	29%	22%
Academic Rigor	2%	14%	5%
Weighted Grade for Class	27%	14%	25%
Other			

Grades also play a role in whether students sign up for dual enrollment credits. “I believe students do not enroll in dual enrollment classes because of the extra money and because they are uncertain as to whether they can do well enough in the class to pay.” Students are also reluctant to sign up for dual enrollment classes as they are unsure of how well they may do. “They want to see how well they are going to do in high school before they take this on and pay for it,” said a teacher. Maturity is another barrier. Some students are not ready for the rigor of dual enrollment, and parents know they are not mature enough or ready enough, commented a teacher.

Does economics or social class impact participation in dual enrollment? Is there a correlation between dual enrollment participation and participation in the free and reduced lunch program? Enrollment at both schools is high and neither one of the schools has a large population that qualified for free and reduced lunch. There are 6 high schools in the southwestern United States school district, and the number of students participating in

dual enrollment and the number of students qualifying for free and reduced lunch are directly correlated.

Table 10

Southwestern High School Percentage of Free and Reduced Lunch Participation

High School	% Elig. Free	% Elig. Reduced	% Elig. Free and Reduced	Total HS Enrollment	Total DE Enrollment 2011-2012	% Enrolled in DE
Corona Del Sol	6.16%	1.71%	7.87%	2,580	456	17.67%
Desert Vista	3.14%	0.84%	3.98%	3,089	924	29.91%
Marcos De Niza	29.69%	2.59%	32.27%	2,011	170	8.45%
McClintock	31.64%	3.14%	34.78%	2,007	138	6.88%
Mountain Pointe	11.15%	2.37%	13.53%	2,824	457	16.18%
Tempe	59.77%	6.33%	66.10%	1,643	37	2.25%

Does ethnicity and gender impact dual enrollment rates? Are there more females enrolled and less males students? Do more students who are White enroll than those of a different ethnicity? Gender and ethnicity seem to have an impact on dual enrollment participation. In the 2012-13 school year, 56% of the students were female while 42% were male and 2% undeclared. Students participating in the program are overwhelming White with 59%, 16% Hispanic, 6 % Asian, 3% Black, 1% American Indian ,and 15% other/undeclared. One of the reasons more females than males participate in dual enrollment may be because males are not convinced that dual enrollment courses are beneficial. Several male students surveyed claimed

Advanced Placement courses are better and dual enrollment courses don't transfer. "It (dual enrollment) doesn't always transfer and AP is superior," wrote one male student.

Although there are more female students and more White students participating in dual enrollment parents, teachers, counselors, and administrators said that dual enrollment participation was not impacted by gender or ethnicity. Focus group participants reported they say no evidence gender or ethnicity made a difference when students were choosing whether to enroll in dual enrollment classes or not.

Communication, complicated registration processes, gender, and ethnicity all seem to be barriers and obstacles for high school students participating in dual enrollment classes. Both student surveys and focus groups report communication issues on the dual enrollment program.

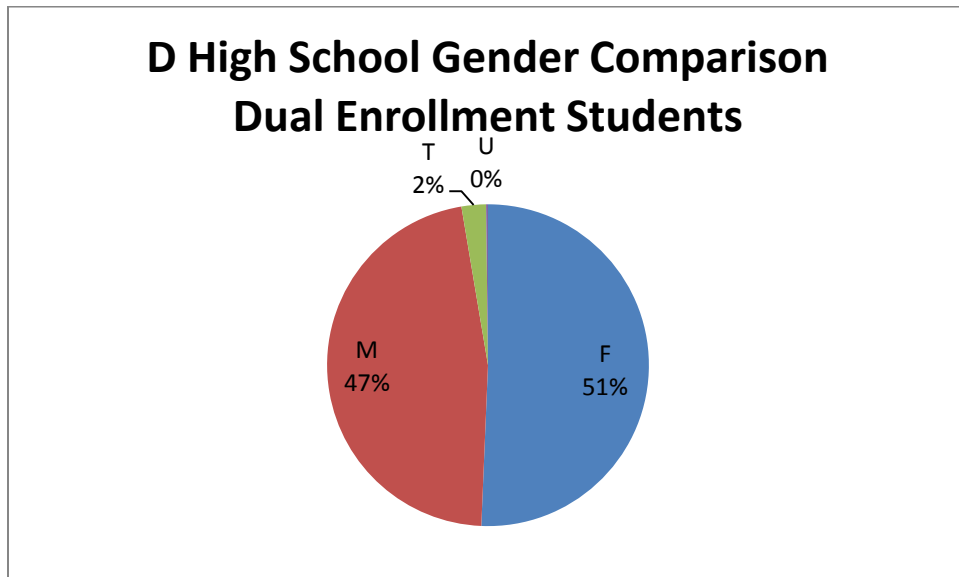


Figure 3. D high school gender comparison dual enrollment students.

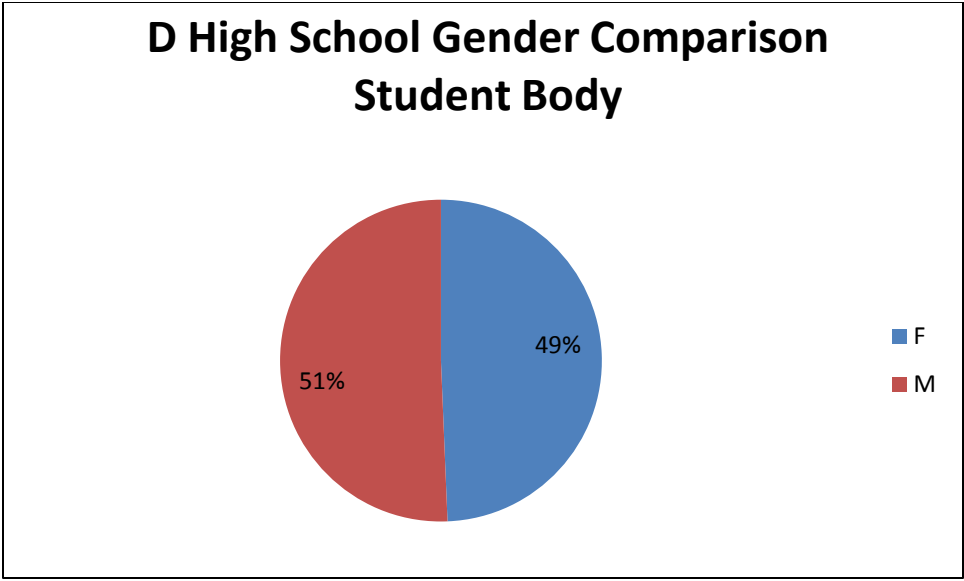


Figure 4. D high school gender comparison student body.

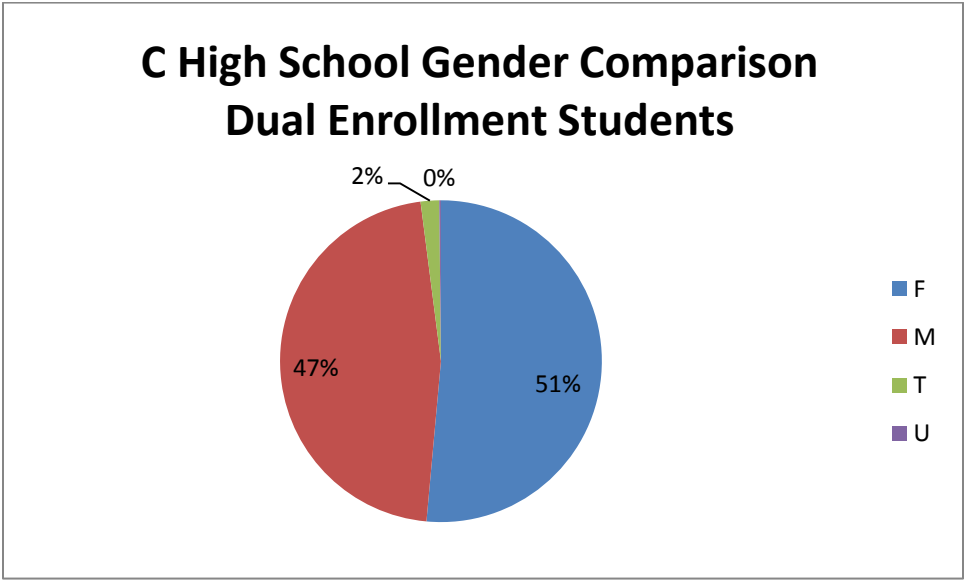


Figure 5. C high school gender comparison dual enrollment students.

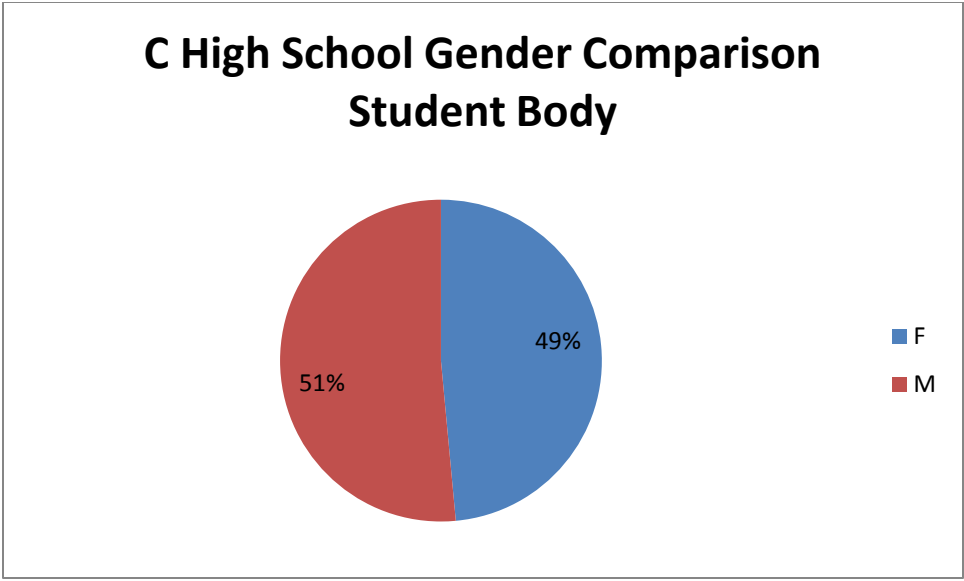


Figure 6. C high school gender comparison student body.

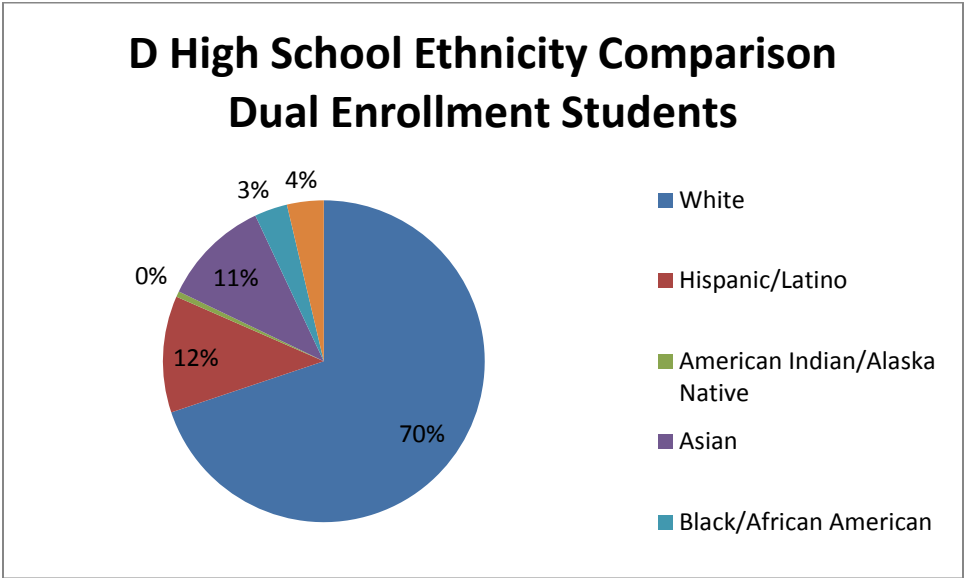


Figure 7. D high school ethnicity comparison dual enrollment students.

D High School Ethnicity Comparison Student Body

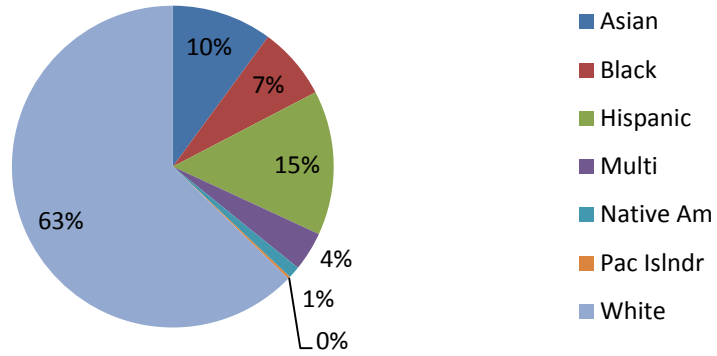


Figure 8. D high school ethnicity comparison student body.

C High School Ethnicity Comparison Dual Enrollment Students

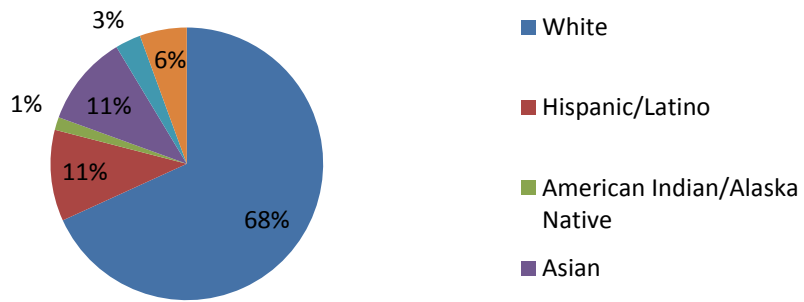


Figure 9. C high school ethnicity comparison dual enrollment students.

C High School Ethnicity Comparison Student Body

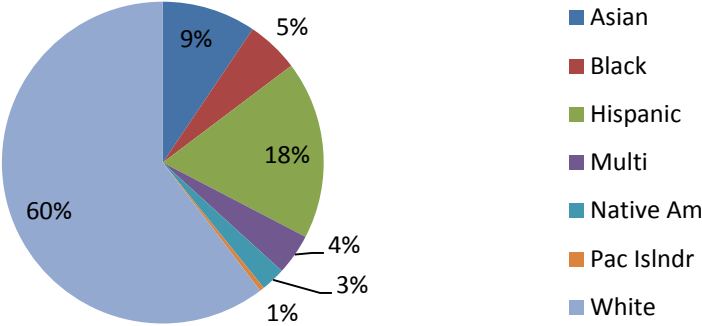


Figure 10. C high school ethnicity comparison student body.

Chapter 5: Summary, Conclusions, Recommendations, and Implications

Introduction

Chapter 5 provides a summary of the research study, summary of the findings and conclusions, recommendations for further practice and further research and implications of this study.

Summary of the Study

Dual Enrollment is one of the leading strategies for improving college completion and retention rates (Hoffman et al., 2009). But little research has been done to see what the barriers and obstacles are that keep students from participating and what motivates students to enroll in dual enrollment courses. Increased research on what are some of the barriers and obstacles and the motivation for participating in dual enrollment programs would make it easier for college and high school administrators to overcome those obstacles and barriers, thus increasing college completion and retention rates.

Dual enrollment programs are increasing across the country. Most high schools have dual enrollment programs, but there is a huge potential to increase the number of students who participate in dual enrollment if high school and college administrators had a better understanding of the barriers and obstacles that keep students from joining. Research shows that dual enrollment courses help students prepare for the academic rigor of college (National High School Center, 2007), improve college completion and retention rates, (Hoffman et al., 2009), and saves time and money (Morrison, 2008).

To try to identify the barriers and obstacles to participating in dual enrollment my research focused on two high schools in the southwestern part of the United States. Both

high schools were large, comprehensive high schools that had long histories of participating in a dual enrollment program. The two schools have the largest dual enrollment programs in the state. D High School had 1,086 out of 3,076 and C High School had 608 out of 2,819 students enrolled in 2012-13 school year.

The qualitative, descriptive study consisted of a student survey and a focus group at each high school. The study looked at familiarity and understanding of the program, communication, decision making, motivation, gender, and ethnicity. The qualitative descriptive study included 76 students at D High School and 21 students at C High School. The focus group at D High School was comprised of two counselors, two parents, one teacher, and the assistant principal. At C High School the focus group consisted of two parents, two teachers, the guidance counselor, administrative assistant, and the assistant principal.

Data was collected from the student survey and focus group interviews. Student surveys were tallied along with student comments. Focus group interviews were recorded and transcribed. Data collected was analysis for themes and patterns that revolved around the researcher's questions.

Summary of the Findings and Conclusions

Question 1

Are students and parents aware and informed of dual enrollment opportunities at their high school? Is communication or lack of information about dual enrollment opportunities a significant barrier to participating in dual enrollment courses?

The student surveys show that 96% of the students are familiar with the dual enrollment program at their school. School personnel also seem to feel that they do a good job of informing students and parents about the dual enrollment program at their school. High schools hold open houses, parent meetings, and send newsletters and emails to parents about the dual enrollment programs at their schools.

Finding 1. Students are familiar with the dual enrollment program at their high school.

Students believe the dual enrollment program is valuable. Ninety-six percent of the students who were surveyed felt the dual enrollment program is beneficial. Parents, teachers, counselors, and administrators also cited many positive benefits for students participating in dual enrollment courses. Parents, teachers, counselors, and administrators said students saved time and money, got a jump start on college, and helped define career choices early from the program.

Finding 2. Students believe the dual enrollment program is beneficial to high school students.

Although students and school personnel report students are familiar and believe the program is beneficial, they are not as sure the credits are the same at the college as the high school. The majority of students still say the credits are the same with 30% strongly agreeing and 48% somewhat agreeing, but this is not as strong as the familiarity with the program. Therefore, the conclusion may be that communication about the program is still a significant barrier as students are familiar with the program, but they are not sure the credits are the same at those received at the high school as at the college.

Finding 3. Students are not as positive the credits earned in dual enrollment are the same credits earned at the college as they are familiar with the program or believe the program is beneficial to students.

Parents, teachers, counselors and administrators cite the culture of the high school has an impact on the dual enrollment program at the high school. A culture that supports dual enrollment is important to the success of the program. The high school principal has a key role in developing a culture of support and is instrumental in ensuring dual enrollment is embraced throughout the high school. High schools that do not have support from the principal do not have as successful dual enrollment programs as those that do. The community college representative also plays a vital role in developing a culture of dual enrollment along with parents who support and value education.

Finding 4. The culture of the high school play a role in the participating rate of students in dual enrollment.

First-generation college students seem less likely to participate in dual enrollment programs. Although 96% of the students are familiar with the dual enrollment program, students whose parents graduated from college seem more likely to participate in dual enrollment programs. Knowing from experience how to apply and register for college seemed to make a difference. Students whose parents are familiar with the complicated process of admissions and registrations for a college seem to be more likely to participate in dual enrollment classes. Parents who graduated from college also seem to be more likely to see the benefit of earning college credit while still in high school.

Finding 5. College knowledge seems to have an impact on enrollment

Many students cited the transferability of credits as the reason they did not enroll in dual enrollment courses. Students who plan to attend college out-of-state often felt the credits would not transfer so they did not participate in dual enrollment courses. Focus group participants were also unsure whether credits would transfer out-of-state.

Finding 6. Transferability of credits was a barrier to participation in dual enrollment courses.

Although 96% of the students were aware of the dual enrollment program on their campus, they also reported lack of information on dual enrollment and its benefits was a barrier in participating in the program. Students did not seem to realize the significance or have an accurate picture of the program. Nearly half or 43% of the students cited the lack of information and understanding of the benefits was a barrier to participating in dual enrollment. Students reported information on dual enrollment was often scarce and confusing. Counselors, teachers, and administrators agreed it was difficult to get individualized information to students.

Finding 7. Students are not educated adequately about the program or the benefits.

How to register for class and the difficulty of registering were also cited as barriers for participating in dual enrollment. Twenty-eight percent of the students reported there was a lack of information on how to register. Teachers, counselors, and administrators reported a variety of issues made registering for dual enrollment difficult. The school personnel reported student's under-age status, the lack of an online process which forced students to fill out massive amounts of paperwork, the lag time between when students

turned in the paperwork and the time it took the college to process it made registering difficult. The need for placement test before registering and the difficulty understanding about pre-requisites also made it difficult for students to register for dual enrollment classes.

Finding 8. Registering for dual enrollment classes is difficult and confusing.

Counselors at the high school struggle with advising students about enrolling in dual enrollment courses. Counselors were uncomfortable advising students to participate in dual enrollment programs when high sums of money are involved. Counselors are also uncomfortable with advising students to take dual enrollment classes when course selection is impacted by the college and discipline studied. The maturity of students is also questioned by counselors in regards to enrolling in college classes while students are still in high school. Counselors' personal bias also seems to impact their ability to advise students to participate. If counselors had children in the dual enrollment program and it was not positive, they were more reluctant to advise students to participate.

Finding 9. Counselors are not always supportive of students participating in dual enrollment programs.

Tuition costs are a significant barrier for students in participating in dual enrollment courses. Thirty-six percent of the students found the cost of participating in dual enrollment courses a major obstacle to enrolling. School personnel agreed that cost can be daunting for students. Students struggle with the cost especially if they are taking more than one class or parents have more than one child participating in the dual enrollment program. Counselors are also uneasy advising students to pay for classes they

are not sure will be beneficial and not knowing what kind of financial impact tuition will have on the family.

Finding 10. The cost of tuition for dual enrollment courses is a significant barrier for students to participate.

Teachers have a key role in the dual enrollment program. A majority of students hear about the dual enrollment program from their teacher with 84% of the students reporting their teacher as the source of information. School personnel reported teachers find the program meaningful and do a good job talking to their students about the program. Credibility and trust seem to also be a factor. Teachers who have developed a relationship of trust with students have more impact on students in regards to dual enrollment participating than teachers who have no rapport with students. The trust factor also seems to play a role in relationship with the family; if the family trusts the teacher that also impacts the student participating in dual enrollment courses. Teachers are also gatekeepers to the program. Many dual enrollment classes are honors classes only. This means students wishing to participate in those dual enrollment course must have approval from the teacher to be in class.

Finding 11. Students most often learn about the dual enrollment program from their high school teacher.

While there are many reasons for participating in dual enrollment courses, the biggest motivator was to earn college credit. Over half or 58% of the students reported college credit was the reason they enrolled in dual enrollment courses. Teachers, counselors, administrators, and parents agree that earning college credit simultaneously as

high school credit is the biggest motivator for students to participate in the dual enrollment program.

Finding 12. The biggest motivator for students to participate in dual enrollment courses is the earn college credit.

Family finances seem to play a role in whether student participate in dual enrollment courses. In looking at the percentage of students who qualify for free and reduced lunch in comparison with the percentage of students who take dual enrollment courses, there seems to be a correlation. Look at more than just two high schools, but several high school in the same urban area served by the same community college, and the correlation continues. Economics seem to impact participation in the dual enrollment program.

Finding 13. Students who qualify for free or reduced lunch are less likely to participate in dual enrollment courses than students who do not qualify.

Counselors, teachers, and administrators report that dual enrollment participation is not impacted by gender or ethnicity. The participating rates seem to disagree. There are more female students and more White students participating in dual enrollment courses than the corresponding number of female and White students at the schools. While the percentage of female to male is not as great, the ethnicity seems to have more impact. There are 51% females and 47% males participating in dual enrollment at the two schools. And at C high school, there are 68% White and 70% White at D school.

Findings 14. There are more students who are female and White than any other ethnicity.

Recommendations

Recommendations for Practice

Recommendation 1. Ensure communication of the dual enrollment program along with program benefits is complete and thorough.

Students, teachers, parents, counselors, and administrators seem to be familiar with the dual enrollment program but many students don't seem to understand the benefits completely. Counselors admit they do not have time to work with students individually. Although the schools hold open houses, send home flyers, and send information about the program through the school portal, there still seems to be a communication breakdown. Teachers seem to be the key communicator for the program and have more time for one-on-one discussion. A majority of students learned about dual enrollment from the teachers. One teacher said that when she had the time to call all her students, they all signed up for dual enrollment. But when she didn't have time, enrollment was considerably lower. This reinforces the idea that lack of information is a significant barrier to participating in the program.

Teachers need to be better educated about the dual enrollment program including how credits transfer and college pathways related to their classes they teach. Teachers might benefit from being required to attend training on the program. It would also be helpful for teachers to have more resources to help them communicate to students about the program. Short videos highlighting the benefits of the program, information on career pathways including what classes are needed for an Associate Degree and the Arizona General Education Curriculum and how dual enrollment classes increase college and

completion and retention rates would be helpful information for teachers to have access to. They use of social media may also be beneficial. Additionally, teachers would benefit from some kind of incentive to motivate them to access resources. Currently, schools receive a stipend that goes back to the school to disseminate as they want. If teachers could use the stipend for professional development for their classroom specifically, more teachers may be motivated to explain the program more thoroughly and work with students to ensure an understanding of the program.

Recommendation 2. Ensure the high school culture is supportive of dual enrollment beginning with the principal down to the teachers and counselors.

The culture of the high school impacts participation in dual enrollment. It is important that school administrators, counselors, and teachers are supportive of dual enrollment. Educating staff about the benefits of the program is an essential part of developing a supportive culture. Some of the counselors were less than supportive. If counselors understood dual enrollment better, it might help them become more supportive of dual enrollment. Although there was one counselor who regretted her daughter's participation in dual enrollment, additional information may help. If she had more information, she might realize dual enrollment classes allow students to dual major, have time to work more, and take master's level classes. Additional information on dual enrollment for counselors may impact the culture and increase enrollment. Additionally, district support of dual enrollment and principals talking to principals about the program would help schools develop a culture of dual enrollment.

The culture of the high school also may have an impact whether the high school is a college-going high school or not. Students who attend high schools with a strong college-going culture are more likely to attend college (Hooker & Brand, 2010, p. 77). D High School reported they had a college going culture. Their dual enrollment is also the highest in the state.

Recommendation 3. Ensure at-risk students and first-generation students are informed and understand the benefits and processes to participate in dual enrollment program even if the presentation has to be student specific.

Enrolling in college is a difficult process to navigate through. Understanding the process as well as the ramifications is hard for students who have no help from parents. These students should be able to meet individually with a counselor or teacher who understand the logistics as well as the ramifications of enrolling in college courses while still in high school means. Language is also sometimes a barrier. Meetings for Spanish speaking parents should be held at schools to help those parents understand the dual enrollment program. The credibility of the person giving the information would be key for these students so teachers or counselors who have developed a relationship with these students should also be part of the process of informing at-risk and first generation students.

Recommendation 4. Streamline the admissions and registration process so it is easily understood and easy to perform. An online registration form would alleviate many of the current issues.

Registration and admissions to the dual enrollment program is a major obstacle for students. The process needs to be online and easy. Currently students must go on two web sites to apply. Payment does not happen until two or three weeks after students have turned in the paperwork. Accessing the correct web site and trying to understand the confusing registration jargon of MEID and Student ID makes students frustrated and confused. Students who are not in high school, but attend the community college apply and register online. The steps are easy to follow and students pay at the time they register. The process should be used for dual enrollment students. Although the dual enrollment students are required to have a parent permission form, the form could be separate from the online process.

Recommendation 5. A more directed approach should be used to encourage students of different ethnicities to participate in dual enrollment courses. Parent presentations in Spanish along with teachers and counselors who acknowledge that students of color are less to participate in dual enrollment programs will help. Often just awareness of the issue can make a difference and may help encourage students from different ethnicities to participate.

Recommendations for Future Research

Recommendation 1. Further research should expand and look at the impact culture has on dual enrollment participation and how a dual enrollment culture is developed.

My study discussed the impact of culture on the dual enrollment program. It would be beneficial to expand and see how a dual enrollment culture is developed and what a

dual enrollment culture looks like. While culture seemed to play a significant role in student dual enrollment participation, this study did not focus on the role culture plays and how it impacts the attitudes of administrators, counselors, and teachers as they work with the dual enrollment program. It would be helpful to compare schools with successful dual enrollment programs with those with struggling dual enrollment programs to see what the differences are in cultures.

Recommendation 2. Further research should consider methods of improving communication about the dual enrollment program.

Communication was a major issue in my research. Students reported a variety of communication issues. “Too busy—didn’t hear about it till the deadline was almost here,” said one student. Another claimed, “I learned about it too late and I didn’t think it mattered.” Another reported, “There is not enough information from teachers.” And still another wrote, “Students did not hear about enough.”

Not only did the high schools struggle with communication about the program, but communication about how to register for classes was also a challenge at the high schools. Many students reported the registration process was difficult to understand and confusing.

Research on improving communication issues could impact participation rates at high schools if successful strategies were developed.

Recommendation 3. Further research could look at studying the impact of offering classes for free.

It would be beneficial to study the impact on dual enrollment participation if classes were offered without students having to pay the cost of tuition. Cost was a major barrier for many students. More than a third of the students reported cost to be a barrier for participation in dual enrollment courses. In some states, dual enrollment classes are offered for free or at a minimal fee to students. For example in Utah, students taking dual enrollment courses pay \$5 a credit (Salt Lake Community College, 2014).

Recommendation 4. Further research could focus on the challenge of hiring qualified high school dual enrollment teachers and why some schools do better than others.

Finding qualified teachers to teach dual enrollment courses was a challenge reported by focus group participants. Without teachers to teach dual enrollment courses, dual enrollment participation is limited. Some schools are able to hire more qualified teachers than others. It would be advantageous to study what makes the difference. What do some schools do differently than others to hire qualified dual enrollment teachers? Does the location and reputation of the high school have an impact?

Recommendation 5. Further research could focus on social class and ethnicity. While my research showed there was a correlation between free and reduced lunch and how many students participated in dual enrollment, it would be beneficial to expand the study. It would be valuable to know why there is a correlation. Is the correlation due to economics only? Does a tuition assistance program help or have impact? Ethnicity also had an impact on dual enrollment participation. The largest ethnic group to participate in

dual enrollment is White students. Does ethnicity and first-generation college students, who are also often non-White, have an impact?

Research has shown the students who would benefit most from dual enrollment participation are often those who fail to do so. Latinos often fall in the group, said Pete Loza in an article titled, “A System at Risk: College Outreach Programs and the Educational Neglect of Underachieving Latino High school Students” (Loza, 2003, p. 43). Middle-class families and their children understand the culture and social nuances. Latino families are often left out of the subtle communication that keeps parents informed. Loza says schools have the same social and economic divisions present in U.S. society.

Implications

K-12 education is designed to prepare students to be college and career ready. It is a state and national goal. But the reality is K-12 education is facing many challenges including high numbers of high school and college dropouts, increasing numbers of students who need remediation courses, and unprepared students for the workplace (Edmunds et al., 2010). College completion rates are dismal. Nearly 30% of college and university students drop out during their first year of college and half of the students never graduate. Post-secondary rates have not increased. For more than three decades college completion rates in the United States have remained the same. Latino and minority students have seen their overall college completion rates decline (Bowler, 2009). Earning a college degree is tough. Nationally, less than 50% of students enrolled in college will earn an associate degree within three years or a bachelor’s degree within six years. Even more alarming is the dropout rate. Twenty-five percent of the full-time freshman at four-

year institutions drop out, and 39% of the freshmen at two-year institutions do not return the following fall. The rates are even worse for part-time students (Karp, 2012).

Dual enrollment is considered one of the most promising strategies to improve college completion and retention rates (Hoffman et al., 2009). An increase in college completion and retention rates can help the United States remain competitive in a global economy and reduce workforce shortages (Morrison, 2008). But only a fraction of the students eligible to participate do. The two high schools in the research study had the largest dual enrollment programs in the state but less than 30% participated at one school and less than a 20% percent participated in the second. This study adds to the growing amount of research in an area that is relatively new. Dual enrollment programs have been around less than 30 years and the programs have really taken off in the last decade. There are few studies that look at what keeps students from enrolling in college classes while they are still in high school.

Trying to identifying the barriers that keep students from participating will be helpful to college and high school administrators as the merits of dual enrollment programs continue to be studied. Even high schools with successful programs have numerous barriers and obstacles that keep students from participating. In this qualitative, descriptive study numerous barriers and obstacles were identified that kept students from enrolling. Barriers and obstacles identified in the study included communication and lack of understanding about dual enrollment, confusion and frustration with the admissions and registration process, less than supportive counselors, school culture, costs, lack of qualified teachers, and ethnicity.

Ironically the two high schools in the study also have the biggest dual enrollment programs in the state. If those with successful programs still struggle to attract all eligible students, it may be beneficial to look at these same issues at high school across the state. Issues with communication, costs, confusion, and difficulty navigating through the admissions and registration process of the dual enrollment classes could impact their programs.

The counselor response was also interesting. The study also identified barriers for students in the counseling office. Counselors did not like advising students going to a variety of colleges coming from a variety of financial situations and a variety of maturity levels. Counselors are well-known for their impact on advising students. Some of the attitudes of counselors in a high school that embraced dual enrollment was surprising. School counselors seem to have a key role in the success of a dual enrollment program at the high school.

Ethnicity also seems to play a role in dual enrollment participation. It would be helpful if more college and high school administrators were aware of the challenges of this population and made more of an effort to address those issues. Interestingly teachers, counselors, and school administrators seemed to be unaware of the impact ethnicity had on participation in the program.

Dual enrollment has many benefits for students. If more college and high school administrators were aware and informed about the barriers and obstacles that keep students from participating, efforts could be made to address those issues and more students could enroll. As the leading strategy for college completion and retention, if more

students participated in dual enrollment, more students could possibly graduate from college, saving time and money, and helping the country to maintain its competitive edge in a global society.

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APPENDIX A

Survey

1. Are dual enrollment classes held on your campus?

A. Yes, B. No. C. I don't know

2. How did you hear about dual enrollment classes?

From my teacher _____

From my parents _____

From my counselor _____

From my principal _____

From my peers _____

I have never heard anything about dual enrollment classes at
my school _____

3. Are you now, are have you ever been enrolled in a dual enrollment class?

A. Yes, B. No

4. If you participated in dual enrollment when it was offered what were your reasons for participating. Please rank by order of importance

Earn college credit ____

Save time and money ____

Academic rigor ____

Weighted grade for class ____

Other _____

5. If you did not participate in dual enrollment in the class it was offered please explain why?

Did not know it was available _____

Cost _____

Did not think the credit would apply to my college _____

Not interested in earning college credit

Not going to college _____

Parents do not want to pay the tuition

Teacher _____

Other _____

6. Who was the most influential person in your decision to enroll in dual enrollment classes?

Teacher _____

Parents or parent _____

Counselor _____

School administrator _____

Peers _____

You made the decision on your own _____

7. What do you think is the biggest reason students do not enroll in dual enrollment classes?

Lack of information and understanding of the benefits_____

Lack of information on how to register_____

Difficulty in registering_____

Cost of participating in dual enrollment classes_____

Classes too difficult_____

Other_____

8. Do you think your school educates students and parents adequately about dual enrollment classes?

No, I did not know there were dual enrollment classes at my school_____

No, my teacher did not talk about dual enrollment in my class_____

The information is hard to understand and difficult to follow_____

My teacher did not encourage me to enroll in dual enrollment_____

My parents did not know about dual enrollment_____

9. What is the biggest motivator for you to participate in dual enrollment classes?

My parents _____

Counselors _____

Weighted grade _____

To get ahead in college _____

Other _____

10. Please circle the correct Gender M F

Year in school freshman sophomore junior senior

11. Please circle your ethnicity

Caucasian, Hispanic, African American, Asian, American Indian, other

12. Did you mother graduate from college? Yes No

13. Did you father graduate from college? Yes No

14. Did you mother attend college but not graduate Yes No

15. Did you father attend college but not graduate Yes No

16. Do you plan on attending college?

17. Do you plan to attend a University or a community college?

University Community College

Other _____

18. What income group do your parents fall in

30,000 or below

30,000 to 50,000

50,000 to 75,000

75,000 to 100,000

Over 100,000

How will you pay for college?

Parents Grants and loans pay my own way Savings

Other _____

APPENDIX B
Revised Student Survey

Dual Enrollment Survey questions

1. I am familiar with the dual enrollment program on my high school campus.
Strongly agree, somewhat agree, no opinion, slightly disagree, strongly disagree
2. The dual enrollment program on my high school campus is beneficial for students.
Strongly agree, somewhat agree, no opinion, slightly disagree, strongly disagree
3. Dual enrollment credits earned on my high school campus are the same credit you would earn at the college. Strongly agree, somewhat agree, no opinion, slightly disagree, strongly disagree
4. How did you hear about dual enrollment classes?
From my teacher _____
From my parents _____
From my counselor _____
From my principal _____
From my peers _____
I have never heard anything about dual enrollment classes at my school _____
5. Have you ever been in a high school class that was offered for dual enrollment?
A. Yes B. No
6. Are you now, are have you ever been enrolled in a dual enrollment class?
B. Yes, B. No
7. Did you sign up for dual enrollment in the high school class that offered dual enrollment?
A. Yes B. No

8. If you participated in dual enrollment when it was offered what were your reasons for participating. Please rank by order of importance

Earn college credit ____

Save time and money ____

Academic rigor ____

Weighted grade for class ____

Other _____

9. If you did not participate in dual enrollment in the class it was offered please explain why?

Cost ____

Did not think the credit would apply to my college ____

Not interested in earning college credit

Not going to college ____

Parents do not want to pay the tuition

Teacher _____

Other _____

10. Who was the most influential in your decision to enroll in dual enrollment classes?

Teacher _____

Parents or parent _____

Counselor _____

School administrator _____

Peers _____

You made the decision on your own _____

11. What do you think is the biggest reason students do not enroll in dual enrollment classes?

Lack of information and understanding of the benefits _____

Lack of information on how to register _____

Difficulty in registering _____

Cost of participating in dual enrollment classes _____

Other _____

12. Do you think your school educates students and parents adequately about dual enrollment classes?

No, I did not know there were dual enrollment classes at my school _____

No, my teacher did not talk about dual enrollment in my class _____

The information is hard to understand and difficult to follow _____

My teacher did not encourage me to enroll in dual enrollment _____

My parents did not know about dual enrollment _____

13. What is the biggest motivator for you to participate in dual enrollment classes?

My parents _____

Counselors _____

Weighted grade _____

To get ahead in college _____

Other _____

14. Please circle the correct Gender M F

Year in school: freshman sophomore junior senior

15. Did your mother graduate from college? Yes No

16. Did your father graduate from college? Yes No

17. Did your mother attend college but not graduate? Yes No

18. Did your father attend college but not graduate? Yes No

19. Do you plan on attending college?

Yes, No, undecided

20. Do you plan to attend a University or a community college?

University Community College

Other _____

21. What income group do your parents fall in

30,000 or below

30,000 to 50,000

50,000 to 75,000

75,000 to 100,000

Over 100,000

How will you pay for college? Parents, Grants and loans, pay my own way, Savings,
Other

Would you be willing to be interviewed in person for clarification or additional information with the researcher conducting the surveys? Yes,

Name _____

Phone number _____

High School _____

APPENDIX C

Informed Consent Letter

Dear High School;

My name is EJ Anderson and I am a doctoral student in Educational Leadership at Northern Arizona University. I am currently working on my dissertation. My dissertation requires me to develop a study and perform research. Participation in my research study is strictly voluntary. I am looking for 6 -10 people including counselors, administrators, teachers and parents to participate in a one hour focus group. Participants will be asked a number of questions about their thoughts and feelings on enrolling in dual enrollment courses.

Would you be willing to invite 6-10 counselors, administrators, teachers and parents to participate in my focus group on dual enrollment? The one hour session will be held at your convenience.

The purpose of this study is to identify barriers and obstacles for students participating in dual enrollment courses while there are still in high school. Focus group participants may withdraw at any time fear or negative consequences. Responses are strictly confidential and anonymous. The results of the research will be provided in a qualitative summary.

No individual identifiable information will be presented in my dissertation. All information will be held at Northern Arizona University for three years. At the end of three years all recorded data and other information will be destroyed.

I will receive no personal benefits from performing this research except for the contribution to the study and literature on this topic. For the professional community, there is great potential benefit in providing additional knowledge and insights to high school and college administrators about this topic. Dual enrollment is one of the leading strategies to increase the number of students who attend and graduate from college.

Focus group participants, have the right to review the results of this research if they wish. A copy of the results may be obtained by contacting me at 480-892-7873 or emailing me at emma.anderson@riosalado.edu.

If you decide to participate in this research, you will be given a survey to complete. The survey will take less than 15 minutes.

APPENDIX D

Informed Consent Forms

Human Subject Informed Consent

Education Leadership, 808 E. Princeton Gilbert AZ, & 480-242-7208

Project Title: Barriers and obstacles of participating in dual enrollment

Dear Participant:

You are being asked to participate in a project conducted through Maricopa County Community Colleges by **EJ ANDERSON** that involves research. The researcher is required to receive your informed consent before you participate in this project.

EJ ANDERSON will explain to you in detail: (1) the purpose of the project; (2) what you will be asked to do and how long your participation will last; (3) how your personal information, if collected, will be kept confidential; (4) if you will receive any compensation; (5) the benefits; and (6) potential risks of participation.

Your participation in research is voluntary. If you choose not to participate, there are no penalties or loss of benefits or services that you are otherwise entitled. If you decide to participate and then withdraw or skip a question there are also no penalties or loss of benefits or services. Whether or not you choose to participate in this project will have no effect on your relationship with MCCC now or in the future.

A basic explanation of the project is written below. Please read this explanation and discuss it with the **EJ ANDERSON**. Feel free to ask questions to help you understand the project. After any questions you may have are answered and you decide to participate in the research, please sign on the last page of this form in the presence of the person who explained the project to you. A copy of this form will be given to you to keep.

1. PROJECT PURPOSE:

This study is to identify the barriers and obstacles for students to enroll in dual enrollment classes while in high school.

2. EXPLANATION OF PROCEDURES:

Students will be surveyed on their thoughts and feeling about enrolling in dual enrollment classes. The survey will take approximately 15 minutes and include 20 questions. Some students will be asked to participate in a follow up more-in-depth interview. In-depth interviews will be less than 1 hour. The interviews will be held in the spring semester of the school year.

3. CONFIDENTIALITY:

Students will not be identified in the dissertation by name. Information on ethnicity, economic status and gender will be tabulated but not linked to the student's name.

4. COMPENSATION:

There will be no compensation for participants of the study.

5. BENEFITS:

The study will help to identify obstacles and barriers that keep students from enrolling in dual enrollment courses. Identifying obstacles and barriers to enrolling in dual enrollment programs will help college and high school administrators develop strategies to overcome barriers and obstacles so more students can enroll. If more students participated in dual enrollment classes it may increase college retention and completion rates.

6. RISKS:

There are no risks to participating in the survey. Student participation is voluntary.

7. CONSENT:

I have read the above information about **barriers and obstacles to enrolling in dual enrollment** and have been given an opportunity to ask questions. I agree to participate in this project, and I have been given a copy of this consent document.

I agree to be audio recorded for this research. YES NO

_____ Date _____
Signature of Participant

Printed Name of Participant

_____ Date _____
Signature of Research Representative

EJ Anderson MCCC

The MCCC institutional Review Board Office can be reached at 480-731-8701. If you have any questions about: (1) the conduct of the project, or (2) your rights as a research participant, or (3) a research-related injury. Any other questions about the research project should be directed to:

EJ Anderson

[480-242-7208/emma.anderson@riosalado.edu](mailto:emma.anderson@riosalado.edu)

Wally Delecki
Northern Arizona University

480-776-4681/walter.delecki@nau.edu

Human Subject Informed Consent

Education Leadership, 808 E. Princeton Gilbert AZ, & 480-242-7208

Project Title: Barriers and obstacles of participating in dual enrollment

Dear Participant:

You are being asked to participate in a project conducted through Maricopa County Community Colleges by **EJ ANDERSON** that involves research. The researcher is required to receive your informed consent before you participate in this project.

EJ ANDERSON will explain to you in detail: (1) the purpose of the project; (2) what you will be asked to do and how long your participation will last; (3) how your personal information, if collected, will be kept confidential; (4) if you will receive any compensation; (5) the benefits; and (6) potential risks of participation.

Your participation in research is voluntary. If you choose not to participate, there are no penalties or loss of benefits or services that you are otherwise entitled. If you decide to participate and then withdraw or skip a question there are also no penalties or loss of benefits or services. Whether or not you choose to participate in this project will have no effect on your relationship with MCCCCD now or in the future.

A basic explanation of the project is written below. Please read this explanation and discuss it with the **EJ ANDERSON**. Feel free to ask questions to help you understand the project. After any questions you may have are answered and you decide to participate in the research, please sign on the last page of this form in the presence of the person who explained the project to you. A copy of this form will be given to you to keep.

1. PROJECT PURPOSE:

This study is to identify the barriers and obstacles for students to enroll in dual enrollment classes while in high school.

2. EXPLANATION OF PROCEDURES:

Students will be surveyed on their thoughts and feeling about enrolling in dual enrollment classes. The survey will take approximately 15 minutes and include 20 questions. Some students will be asked to participate in a follow up more-in-depth interview. In-depth interviews will be less than 1 hour. The interviews will be held in the spring semester of the school year.

3. CONFIDENTIALITY:

Students will not be identified in the dissertation by name. Information on ethnicity, economic status and gender will be tabulated but not linked to the student’s name.

4. COMPENSATION:

There will be no compensation for participants of the study.

5. BENEFITS:

The study will help to identify obstacles and barriers that keep students from enrolling in dual enrollment courses. Identifying obstacles and barriers to enrolling in dual enrollment programs will help college and high school administrators develop strategies to overcome barriers and obstacles so more students can enroll. If more students participated in dual enrollment classes it may increase college retention and completion rates.

6. RISKS:

There are no risks to participating in the survey. Student participation is voluntary.

7. CONSENT:

I have read the above information about **barriers and obstacles to enrolling in dual enrollment** and have been given an opportunity to ask questions. I agree to participate in this project, and I have been given a copy of this consent document.

I agree to be audio recorded for this research. YES NO

Signature of Participant Date _____

Printed Name of Participant

Signature of Research Representative Date _____

EJ Anderson MCCCD

The MCCD institutional Review Board Office can be reached at 480-731-8701. If you have any questions about: (1) the conduct of the project, or (2) your rights as a research participant, or (3) a research-related injury. Any other questions about the research project should be directed to:

EJ Anderson
480-242-7208/emma.anderson@riosalado.edu
480-776-4681/walter.delecki@nau.edu

Wally Delecki
Northern Arizona University



Assent form for Research Involving Children

Education Leadership, 808 E. Princeton, Gilbert AZ, 85234 & 480-242-7208

Barriers and obstacles

Project Title: Barriers and obstacles of participating in dual enrollment

Dear Parents:

Your student is being asked to participate in a project conducted through Maricopa County Community Colleges by **EJ ANDERSON** that involves research. EJ Anderson is a doctoral student at Northern Arizona University. As a researcher, EJ Anderson, is required to receive your informed consent before your student can participate in this project.

A basic explanation of the project is written below. Please read this explanation. Feel free to ask questions to help you understand the project. If you decide to allow your student to participate in the research, please sign on the last page of this form and return it to your high school

1. PROJECT PURPOSE:

This study is to identify the barriers and obstacles for students to enroll in dual enrollment classes while in high school. In this study your student will be asked to take a brief survey which will take about 15 minutes and include 20 questions. Some students will be asked to participate in a follow-up more in-depth interview. In-depth interviews will be less than 1 hour. The interview will be held in the spring semester of the school year. There are no known risks to your student.

All information will be handled in a strictly confidential manner, so that no one will be able to identify your student when the results are recorded/reported.

Your student's participation in this project/study is totally voluntary and you may withdraw at any time without negative consequences. If you wish for your student to withdraw at any time during the study, simply don't turn in the survey.

Please feel free to contact EJ Anderson at 480-242-7208 if you have any questions about the study. Or, for other questions, contact the Institutional Review Board Office (480-731-8701).

I understand the study described above and have been given a copy of the description as outlined above. I agree to allow my student to participate with his/her assent when possible.

Signature of Parent/Guardian Date

ASSENT format:

I understand what I must do in this study and I want to take part in the study.

Signature of Child/Ward Date

EJ Anderson/480-242-7208/emma.anderson@riosalado.edu
Wally Delecki/Northern Arizona University/480-776-4681/walter.delecki@nau.edu