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Using Co-Curricular Programs to Build College Student Self-Efficacy: A Pathway to Second-Year Student Persistence

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USING CO-CURRICULAR PROGRAMS TO BUILD COLLEGE STUDENT SELF-

EFFICACY: A PATHWAY TO SECOND-YEAR STUDENT PERSISTENCE

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By

Benjamin R. Davis

December 2015

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Benjamin R. Davis

Approved July 27, 2015

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ABSTRACT

USING CO-CURRICULAR PROGRAMS TO BUILD COLLEGE STUDENT SELF-

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December 2015

Dissertation supervised by Dr. James Schreiber

This dissertation examines the potential link between college student's self-reported self-efficacy and their eventual persistence into the third-year of matriculation at Arizona State University. Using a framework including Bandura's work on self-efficacy, Ryan & Deci's work on Self-Determination Theory, and Kolb's Model of Experiential Learning, a design for action that may lead to increased student self-efficacy is proposed. This study used a one within one between one-way analysis of variance design with three groups to test the potential correlation between student self-efficacy and student persistence into the third year. The study concluded with no results, as the correlations between the students drop in self-efficacy were insignificant, and the sample size was too small to be relevant. Further research is required to either prove or disprove this link, at

which point the program design presented may be shown to be an effective method for

increasing student persistence towards graduation.

DEDICATION

I would like to dedicate this dissertation my nieces Bella Anne and Cora Leigh, my forthcoming nephew, and any other children that may come. May you all one day reap the benefits of continued work in educational improvement.

ACKNOWLEDGEMENT

First I would like to thank my Committee Chair Dr. James Schreiber, who helped me keep my eye on the prize and my head out of the water throughout this process. Without your steady hand and direct feedback this work would never have been completed.

Thank you also to my committee members Dr. James Rund and Dr. Darius Prier. Your feedback and support has been invaluable in helping me rethink my work and maintain my focus. The experiences and world views you have shared with me through my work has helped me to fully engage with the complexities of educational reform, and how holistic my thinking must be.

To my family, who has supported me in so many ways over the past three years. Your unwavering confidence in my ability to complete this work has fueled me to push through. Without you all I would never have begun this process, and without you I would never have finished.

Finally, to Peter and Shannon Mathis, you have proven to be better friends than I could have ever hoped for. You have taken me into your home once a month for two years and have made me feel a part of your family. I can only hope to one day repay the kindness, generosity, and support you showed me. None of this would have been possible without you both.

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Introduction

Higher education, like so many other fields, is filled with buzzwords. These words and phrases dominate conversations on all levels of the organization. Two of these words that seem to be idiosyncratic to higher education are access and persistence. You would be hard pressed to find any president of a state college or university that does not have on their list of priorities increasing access and persistence. The same can be said about many private schools, as well. But what does that it really mean to have access and persistence on a list of priorities? And, more importantly, are we really doing much to address these issues?

Some might argue that access is not a concern, citing more than fifty-percent of post-secondary institutions do not have entry requirements. However, those statistics include community colleges and technical schools, as well as other institutions of higher education that have traditionally had no requirements for admission. When those statistics are crossed, they create a sense that the problem has gone away, or that it is on the decline, when it really is not.

Over the past few years many schools who do have entrance requirements have worked hard to open up the doors to their institutions, making room for more and more students in an attempt to increase the access to their college or university (Bibbings, 2006). With this increase in acceptance rates has come a steady rise in the number of students entering into higher education of all settings (Haveman & Smeeding, 2006, Bibbings, 2006). According to statistics from the National Center for Higher Education Management Systems (NCHEMS), the rate of students going directly from high school to

college has been steadily rising from 2002 to 2010 (NCHEMS, 2014). Over that span the direct high school to college pipeline went from 56.6% to 62.5%. It would seem we are making headway with the access issue.

However, access is only the first step when it comes to providing a better opportunities for students through higher education. Enrolling in classes and arriving on campus are indeed important first steps, but if we cannot help students persist to graduation we are continuing to fail them. Sadly, over nearly that same span of years (2002-2009) the 6-year graduation rate has only risen from 54.3% to 55.5% (NCHEMS, 2014). In looking solely at the first-year retention rate for U.S. students from 2004-2010, the gains are even more minimal, moving from a 76.4% to a 77.1% (NCHEMS, 2014).

Figure 1

US High School Participation versus Graduation Rates
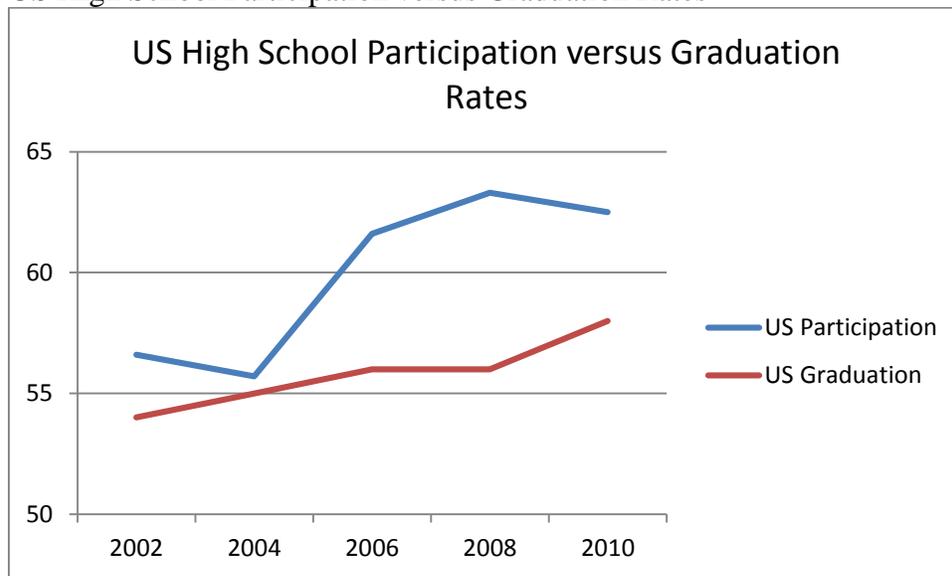
This longitudinal data indicate that while we may be doing a better job of getting students into higher education, we are not doing a proportionally good job of getting them out through to graduation.

Student persistence to graduation must become the top priority for institutions of higher education. One argument is it is better to have some higher education than none at all, and therefore, getting students to college in the first place must be the priority. However, the labor market is continuing to put a greater emphasis on education completion, rewarding those students who stay in school the longest and leave with a degree (Webster, 2014). In 2010, a person with a bachelor's degree made an average of $21,893.00 more per year than a person with only a high school diploma (NCHEMS, 2014). Over the course of a modest forty-year career, this difference ends up amounting to a difference in income of $875,720.00. But, isn't some school better than none? In that same year a person with a bachelor's degree made, on average, $16,256.00 more per year than someone who started but did not complete a bachelor's degree (NCHEMS, 2014). Over the course of that same forty-year, career this disparity would amount to a $650,240.00 difference in income. So yes, while some college is better than none, there is still a sizable income gap between those who those who attend and those who complete a college degree.

Figure 2

Income Differential Over Time (years) Bachelors vs. Some College
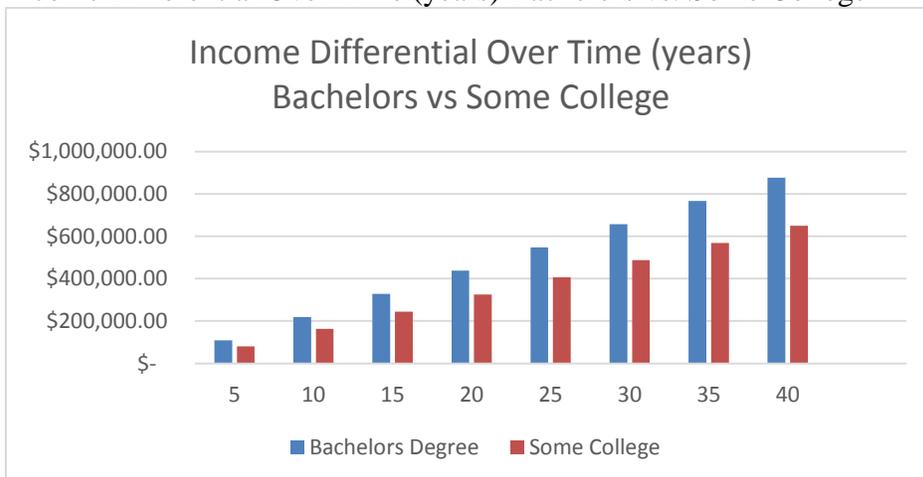
What is more alarming for these individuals, is that not only are they not likely to make less money over their lifetime, but with students need for student loans steadily increasing over the last decade, they are likely to emerge with no degree and loan debt to show for it. In 2007 the average higher education student in the United States took out $4,608.00 in loans annually (NCHEMS, 2014). With the rising cost of tuition and loss of government grant programs, the amount students are taking out each year in loans can be assumed to have risen steadily over the past eight years.

Current discourse (Tankersley, 2014; Madland, 2011) seems to rest heavily within the idea that strong economies are built on the presence of a strong and viable middle class. Widening gaps of income inequality are often pointed to as indicators of an economy and social structure on the verge of collapse. According to census information the top one-percent of wage earners have seen a 275% increase in their after-tax income since 1979, while the middle twenty to eighty percent has only seen a 37% increase over that same period (Webster, 2014). In recent years, much of the attention as to why this income gap persists has focused on education (Webster, 2014). With the advancement of technology, the need for skilled workers who have access to and understanding of these systems has increased dramatically. This need for new skills has further divided the job opportunities for those with higher education degrees and those without (Webster, 2014).

On a macro level, when we are able to increase persistence in education for all students, we create a population better able to compete in a competitive job market, both internationally and domestically. Success in educating students allows those students to better provide for themselves and their families, which in turn will better position their children to have access to a quality education and all the advantages that it brings. This

increased level of education will continue to grow a culture and society of educated people that will continue to innovate the world around them, allowing the United States to remain competitive in an increasingly global marketplace.

The benefits of raising the graduation rate are not solely economic. As we create a system that graduates students at higher rates, we set the stage for those same students to increase their social capital. Social capital is one of the essential building blocks for increasing a person's social mobility. Social capital, as described by Newton (1997) is the series of norms, values, networks, and consequences that, as a society, we collectively agree to. These agreements are what defines a societies collective attitude and defines how people will interact with one another (Newton, 1997). Through these interactions and agreements, society moves away from a Hobbesian state of nature and towards a more ordered, more safe community with shared interests and goals (Newton, 1997). With greater access to these networks and relationships, individuals increase their ability to expand their own social influence, and as a result, have better access to economic and educational resources.

Increases in a person's or a community's social capital has the ability to lead to the creation of human capital (Coleman, 1988). Human capital is created when there is an increase in the skills and competencies of the people that make up the workforce. This, in turn, leads to an increase in the functionality of physical capital (the machines and tools by which work is done) that drives both innovation and the efficiency of business (Coleman, 1988).

An increase in economic efficiency brought on by an increase in human capital is only part of the systemic recovery that would result. The increase in social and economic

capital would also lead to increased capital within the communities in which these students live. In a phenomena known to economists as the F-connection in exchange systems (families, friends, and firms), we see the ripple effect of these capital increases (Coleman, 1988). When each individual student interacts with their families, friends, and the businesses in their neighborhood, they bring with them social organizations that can affect economic exchange. Some economists believe that it is these social organizations, grown through social capital, that are the foundations from which economic structures function (Coleman, 1988).

Access to social capital leads to the creation of other forms of capital (Gardner & Holley, 2011). These forms of capital can include: cultural, symbolic, linguistic, and economic (Bourdieu & Passeron, 1970; Dika & Singh, 2002). While cultural and symbolic forms of capital may be important when looking at one's access to elite status within our society, the potential gain of economic capital is perhaps most impactful for students in communities of color or lower socio-economic status.

Education is, and always has been, the most cogent tool for a person to gain a stronger social status. Many people look to education as their pathway out of poverty and oppression (Haveman & Smeeding, 2006). Simply put, higher education is expected to promote social mobility. While it may, in fact, be able to do that, education is often controlled by the dominant culture or ruling class. Haveman and Smeeding (2006) note that because of the strong links between affluence and education, higher education often turns out to be merely an institution that maintains a parent's economic position for their children.

There is a pervasive myth is that with the dawn of the information age, as we all get greater access to the information on the World Wide Web, the playing field is being leveled. However, simply having the information available is not enough. In fact, you cannot even assume that all people have equal access to this information. While many scholars and politicians debate its existence, a 'digital divide' continues to be present in our country (van Dijk & Hacker, 2003, Hoffman & Novak, 1997, van Dijk, 2006). This 'digital divide' is created by barriers people face that restrict their access to online or digital data and is commonly defined as the gap between those who do and those who do not have access to new forms of technology (van Dijk & Hacker, 2003, van Dijk, 2006). These barriers include: lack of digital experience, no computer or network connection, a lack of digital skills, and a lack of usage opportunities (van Dijk & Hacker, 2003).

This divide has persisted for over twenty years and shows no sign of disappearing in the United States (van Dijk, 2006). While closing the gap completely is possible, it does not make for equal opportunities for all people. Simply having equal access to technology and information may allow for greater participation for all people (van Dijk, 2006), but their ability to capitalize on that access and participation will be connected directly to their level of social capital. In order for this increase in access to technology and information to be meaningful, it requires that people be able to actualize on that information, often times using skills and knowledge gained through higher education.

By increasing persistence in post-secondary education, we may begin to see a ripple effect throughout our society. While the impact on the individual will indeed be great, the impact that a particular individual will continue to make will be even more profound. By bringing the social and cultural capital that students would now have

access to back to their homes and communities, they will be better equipped to increase the ability to access those same forms of capital for those around them.

This is particularly true for any children that they may have. When discussing the reproduction of social status within a community, we must be very mindful of the cultural power of both the family and the parents. Annette Lareau (2011) articulates clearly the role that parents play in the reproduction of social class in her book *Unequal Childhoods: Class, Race, and Family Life*. Through her observations, she is able to put together a vision of how cultural capital is conveyed from the parent(s) to the child, as well as the effects there of. While some are able to provide the social capital and class-related means necessary for their children to pursue success throughout their childhood, others must worry about providing for more basic needs.

It is my belief that by improving success in post-secondary education for all students, and especially those of color and lower socio-economic class, we open a pathway that allows for those students easier access to higher levels of social capital. When we do this, they will be able to mobilize the full potential of their economic and human capital. And finally, through all this, will be able to reproduce higher levels of capital for their own children who can continue their own upward trajectory towards greater social mobility.

But again, economic impacts are simply one of the benefits of increasing persistence in education. Hartog and Oosterbeek (1998) have found that higher levels of education may also lead to greater health and increased happiness. These connections are, in many ways, linked to the economic benefits of increased educational achievement. Better jobs lead to better access to quality healthcare, and larger incomes lead to less

worry about making ends meet. Not surprisingly, these higher levels of health and happiness are not only of benefit to those people who have the education, but is also transferred to their spouses and children (Hartog & Oosterbeek, 1998). Looking even beyond the physical and emotional outcomes of higher levels of educational achievement, Cuñado and Pérez de Gracia (2011) show us that there are also increased levels of self-confidence, self-efficacy, and pleasure. The higher an individual's level of educational achievement, the more likely they are to find themselves in a job that both interests them and excites them, leading to a great level of subjective happiness and well being (Cuñado & Pérez de Gracia, 2011).

So, with all these great things that come with being highly educated, what are people in higher education doing to help our students persist? Over the past two decades, thousands of institutions of higher education have built first-year experience programs with the explicit intent of increasing their persistence rates (Barefoot, 2000, Schrader & Brown, 2008). While many of these programs have resulted in what would appear to be positive results, few are put through rigorous tests to see if the increased persistence is, in fact, a result of the interventions or just unintentional positive results (Barefoot, 2000). When they are, some have even been shown to have little or no positive results towards their intended outcomes (Schrader & Brown, 2008).

Many of these programs were built to address very location-specific concerns and narrowly focus on issues they have identified as problematic to their campus. Despite the idiosyncratic nature of many of these programs, they do often have similarities. Most programs, relying heavily on the foundational research and work of Tinto (1993), place a large emphasis on academic and social integration into the campus. Additionally, many

aim to prepare, or even remediate students to be prepared, for the rigor of college level work (Barefoot, 2000). These focuses are common as they bring together the perceived deficiencies of first-year students as identified by staff and faculty. University staff, and in particular student affairs staff, look at student's social and emotional readiness for college where faculty members often identify students academic disengagement, lack of study skills, and absence of motivation.

The delivery methods for these first-year experience programs often vary widely, as well (Schrader & Brown, 2008). Some consist of semester or yearlong classes that count for class credits. Of these, some are required of first year students, and others are not. Some institutions choose to let individual programs within the university dictate the first-year experience they believe to be the most impactful for their students. This can consist of one day or overnight retreats and are often activities that not only intend to build relationships between students, but also affinity towards the university and specifically their academic program. Because so many programs are so individualized to their institution or program, it is often hard to find a universal way to evaluate the success or failures of one program design over another (Schrader & Brown, 2008).

Central to most first-year intervention programs are increasing student-to-student and student-to-faculty connections. The work of Astin (1997) and Tinto (1993) respectively identify these two connection points at being central and pivotal to student persistence in higher education. Astin (1997) and Tinto (1993) both identify the importance of peer-to-peer relationships for students. The importance of those relationships is not only evident in the move towards first-year experience programs, but also in the development of living-learning communities (Barefoot, 2008). Tinto (1993)

also identifies the relationship between students and the faculty as deeply important for students. In what he refers to as 'academic integration' Tinto (1993) describes that both formal and informal relationships between students and faculty create a sense of belonging and help shift the student from the "teacher-directed environment" (Schrader & Brown, 2008, p. 314) to one that is more self-directed by the students themselves.

While first-year experience intervention programs continue to grow in acceptance, their overall effect on persistence is still in question (Schrader & Brown, 2008, Barefoot, 2000, Willcoxon, Cotter, & Joy, 2011). Many institutions point to gains in first-year persistence (Barefoot, 2000), but their overall effect on whether students persist to graduation is unclear. There is now emerging research that shows that while first-year intervention programs may be effective for the students that participate, the lack of second and third-year interventions may negatively affect overall outcomes (Willcoxson, Cotter, & Joy, 2011). Additionally, the types and focuses of those interventions may need to change in order serve a maturing audience (Willcoxson, Cotter, and Joy, 2011).

Reflection on the uniqueness of each individual student is a reminder of how important it is for a student persistence action plan to be nimble and able to be modified. Often because of the sheer number of students, a lack of time, or a lack of resources, systems have been created that are broad and attempt only to reach those students they have the greatest access to. When this happens, it almost certainly is putting at risk those who may see the greatest returns from the program. Engaging students in a meaningful way requires practitioners to not be confined by theories or programs, but rather to individualize each opportunity they have with a student.

Understanding the important role student affairs practitioners play in a student's persistence is important. Most of the persistence theories recognize the importance of a student making a connection on campus and establishing a sense of belonging. While this can be done a lot of ways, student affairs professionals are often on the front lines. Many of the persistence programs we have already discussed are housed and operated out of the student affairs divisions of higher education.

While a great deal of this work has traditionally fallen to student affairs professionals, if it is to be truly successful the work must be shared across all sectors of higher education. The faculty members and those within academic roles of the university must also acknowledge and make efforts to keep our students enrolled. If for no other reason, they must work together in order to maintain the necessity of their own jobs in a world where many schools are seeing decreased enrollment (Lauerman, 2014; Bidwell, 2013). As enrollment numbers fall at some institutions in the United States, those same institutions must work all the more diligently to keep students engaged and enrolled towards graduation. As a community of professionals dedicated to the higher education of students, staff and faculty both must work to engage students not only in the classroom on an academic level, but outside the classroom on a personal level.

Based on these arguments, I believe that it is time that we take a new approach towards persistence. We can no longer isolate our retention efforts largely to the first year, and we must find a way to effectively personalize experiences for our students. I propose that this new paradigm focus not solely on creating bonds between the student and the institution (staff and faculty), but also looks to create meaningful growth experiences for students. These experiences would be rooted in hands-on opportunities

for students to learn not only inside the classroom, but outside as well. This is a shift that

recognizes that all the work we as higher education professionals do must first be rooted

in pedagogical outcomes, with an eye towards student growth. With a focus on

increasing student motivation through building their self-efficacy, creating co-curricular

experiences on campuses that focus on experiential learning will allow us to better

engage students day to day, and increase their likelihood of persisting to graduation.

Chapter 2

Problem of Practice

Persistence is not an isolated problem, so we must look at the problem within its proper context. Persistence rates vary from region to region, state to state, and school to school. Each area and institution must look at its own students to find out exactly what it is that is preventing them from completing what they begin in higher education. In this chapter we will look at the problem of persistence in higher education in a single context in order to more closely analyze possible solutions.

The American Southwest, and particularly the state of Arizona, is a location within the United States that has a unique culture as well as unique issues. While the issue of illegal immigration has become a hot topic nationally, it is not a new issue in Arizona. Arizona's position along the Mexican border as well as its large American Indian Reservations provide Arizona with a distinctive diversity of population not seen in any other state or region. With this unique diversity comes a set of distinctive issues that must be addressed in ways that are both progressive and culturally sensitive.

For the purposes of this paper, I will be looking specifically at one institution within Arizona. As the largest institution under one central administration in the country, Arizona State University has a very real impact not only on the students that matriculate there, but the larger community in which is resides. Whether or not a student chooses to attend Arizona State University, if you live in Arizona the success of Arizona State students will have an impact on you. The impact of the university on the state's economy is beyond measure.

But, if Arizona State University wants to live up to its self-imposed distinction of 'The New American University', it must find ways to increase the institution's graduation rate. The University cannot make the profound impact it seeks if the undergraduate students are not progressing beyond their second year. The university cannot become the premier American institution it seeks to be if all of its students are not supported through graduation.

In recent years Arizona has seen a sharp increase in its high school to college pipeline. Compared to the rest of the country, the percentage of high school graduates directly enrolling in college has risen dramatically since 2006 (NCHEMS, 2014). As the graph below shows, the current pace of enrollment percentages will soon eclipse the national average. This trend is mirrored by the universities rising enrollment numbers with first-year student enrollment rising 27% over the same period (ASU Fact Book, 2009).

Figure 3

Participation in College Immediately Following High School
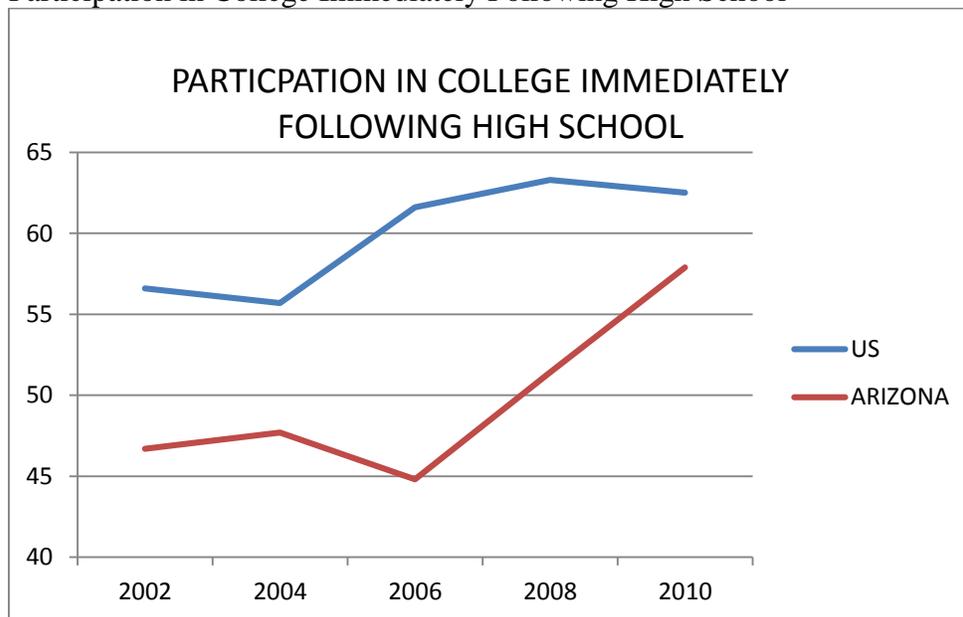
Much of what has been discussed in the literature and in practice surrounding persistence in higher education focuses on successful matriculation into the second year. In many ways, the university has made significant strides towards increasing persistence. First-year persistence rates for the institution exceed both the State of Arizona and national average (Figure 4), but still fall short of Arizona State's self-identified peer institutions.

Figure 4

First Year Retention Rate

First Year Retention Rate

Legend: State of Arizona, US, Arizona State, UCLA, Ohio State, Indiana Univ., Florida State, Michigan State

While this increased first-year persistence is a positive trend, the ultimate goal is for students to successfully graduate. Despite the added effort towards first-year persistence, national graduation rates have not proportionally shifted in recent years. This trend of stagnant graduation rates applies to Arizona State as well, but what is perhaps most alarming is that, despite being competitive in first-year persistence (within ten percent), Arizona State is lagging far behind these same peer institutions in

graduation rate (see Figure 5). Certainly it is not realistic to think that any institution will graduate one hundred percent of the first year students who enroll, but aiming for a number above seventy-five percent is reasonable and attainable.   In fact, in a recent presentation, A New American University: 2015 and Beyond (2015), Arizona State explicitly lays out a goal of increasing the graduation rate to 75-80% and 25,000 graduates.

Figure 5

Six Year Graduation Rates
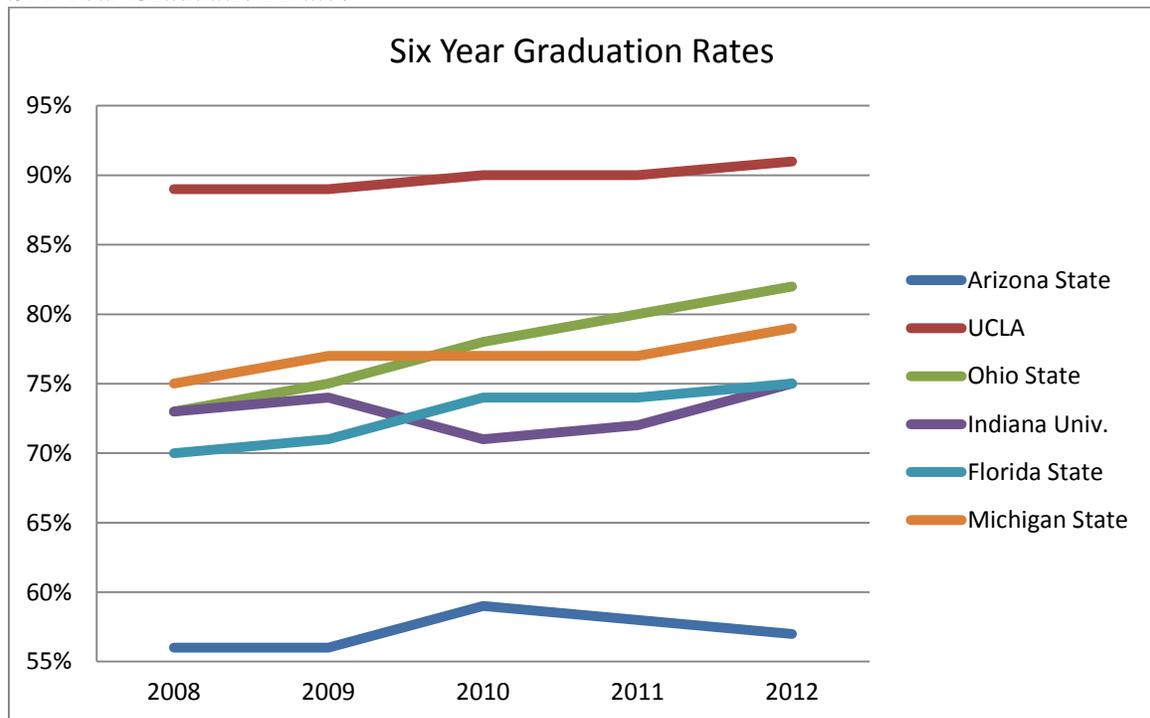
Source: CollegeMeasures.org

So, if Arizona State is succeeding in first-year retention, where is the drop off? Where is the cliff over which students are falling off and not returning? More importantly, once we identify where that cliff exists, how can the institution prevent students from tumbling over it?

The consequences of not addressing this issue could be severe, particularly long term. Not persisting to graduation can have far reaching effects on the students themselves, the institution, and the larger communities from which the students come from. As was previously mentioned, the F-connection in exchange systems shows us that the relative success or failure of each student can have a profound impact on their families, friends, and businesses in a community (Coleman, 1988).

Review of Literature

Model of Institutional Departure

No conversation about student persistence or attrition would be complete without first acknowledging the work of Vincent Tinto. His book *Leaving College* (1975, 1993) is, by all accounts, the basis for much of the research on student attrition. Tinto's (1993) Theory of Institutional Departure has given rise to many volumes of derivative research and is largely looked at as the seminal work in the field of student attrition. His work has not only lead to better understanding of student attrition, but also to the development of many interventions and programs designed to increase student persistence (Bean, 1988).

Instead of the more common pop-culture term of 'drop out', Tinto (1993) refers to a student as 'leaving.' This distinction of using the term 'leaving' is very important because, as Tinto acknowledges, leaving the institution does not necessarily imply dropping out of school completely. A great many outcomes may come from a student's departure from a university, including enrolling at another institution or stopping out for a limited period of time (Tinto, 1993). Researchers and writers are quick to acknowledge this when we discuss students who depart a particular institution and the potential impacts of that departure.

With departure, Tinto (1993) connects attrition research with other social theories, particularly those of Van Gennep (Stages of Rites of Passage) and Durkheim (Suicide) (Bean, 1988). The resulting model looks to Van Gennep's Stages of Rites of Passage: separation, transition, and incorporation to describe the process by which a student creates shared values and becomes integrated into their college environment. For Tinto, this integration into the larger community is crucial to student persistence, because through the lens of Durkheim's Suicide, those who share values with a group are less likely to commit suicide (or in this case remove themselves from the university).

Tinto claims that the greater the extent to which a student is socially and academically integrated into their university community, the more likely that student is to remain or persist at that institution. This concept set the stage for other researchers to investigate how to create these shared group values that lead to persistence for specific groups of students, particularly those who are traditionally underserved. This milieu of research and findings has led directly to the design of many colleges and university's orientation and first-year success programs.

While Tinto's work certainly was groundbreaking and has laid the foundation for an understanding of student departure, it is very narrow in its scope. Because of his heavy reliance on student academic and social integration, the theory does not seem to hold the same level of validity for departure later in the college experience. While he briefly identifies the role of student intention (desire to graduate) as well as external commitments, these are not central to the theory. Some critics contend that these two variables were only introduced to later revisions of the text as a way to shore up his theory against potential argument from the academic community (Bean, 1988). In the

end, Tinto's Theory of Institutional Departure (1993) seems to lose its predictive ability when asked to explain student attrition in later years.

Theory of Involvement

Through his numerous journal articles and books, it can be argued that Astin has contributed as much to the world of higher education research as nearly anyone else. Among these contributions to scholarship is his Theory of Student Involvement (1984).

At the most basic level, Astin's Theory of Student Involvement (1984) presents a very basic equation: the more a student is involved, the more likely they are to be successful and persist. Astin defines involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (1984, p. 518). This concept of an academic experience is not narrowly perceived as activities surrounding purely academic pursuits, but also extra-curricular pursuits, as well. He even goes so far as to frame the context of involvement within the individual. In this way, involvement is not a static term, but actually an active one that requires effort on behalf of the student.

Within this theory, Astin (1984) acknowledges that a student's involvement, or investment of time, will fluctuate over a period of time. Because involvement is both quantitative and qualitative, the amount a student gets back from the experience will be proportional to the time and investment they put in. Therefore by increasing the quality and quantity of our students various involvements on campus, we will see greater returns in their own returns and engagement.

To show how the Theory of Involvement is different from previous pedagogies, Astin (1984) describes three common pedagogical styles and how they differ from his

Involvement Theory. He identifies these three theories specifically because he finds them to be particularly troubling. Astin (1984) believes the use of these theories within the academy turns students into "black box[es]" (p.519) that have on one end inputs of various policies and programs, and on the other end expected outputs of GPA and test scores. What is missing from this equation is the mechanism that takes these inputs in order to create the desired outputs.

The first he describes is Subject-Matter Theory, or Content Theory, wherein the teacher helps students learn by simply exposing them to information. This style of pedagogy is best shown through lecturing, in which a professor is exposing her/his students to information, and they are receiving and internalizing that information. In this model, those who have the most knowledge are seen as the most qualified to teach. Astin (1984) criticizes this model for making the student a passive party in the exchange of information, as opposed to an active participant in their own education.

The second pedagogical theory discussed is Resource Theory, which supposes that students who have greater access to resources (be it physical, fiscal, or human) have greater access to knowledge and the ability to learn. In this model, concepts of student-to-teacher ratio, access to technology, and libraries or laboratories are given high status in the educational process. The better the access to professors, online resources, and great facilities a student has, the better their ability and opportunity to learn. Astin (1984) points out that this pedagogy is, by its nature, limiting because there is a finite supply of prestigious faculty and resources to build and provide technology. He also acknowledges that this pedagogical perspective is only focused on the accumulation of resources, not the distribution of those resources.

The last theory is Individualized (Eclectic). In this approach educators realize that there is no single approach or technique that will work for all students. Because of this, educators must be flexible in their delivery and techniques in order best serve a diverse group of learners. This concept of teaching allows for students to learn both at their own pace and in a way that is comfortable for them. While this pedagogical style might be ideal, Astin (1984) notes that it is very expensive to implement, and may be cost-prohibitive in many situations.

Somewhere in the middle of these three pedagogies, the Theory of Student Involvement exists. Astin (1984) states that:

> [T]he theory of student involvement argues that a particular curriculum, to achieve the effects intended, must elicit sufficient student effort and investment of energy to bring about the desired learning and development. Simply exposing the student to a particular set of courses may or may not work. The theory of involvement, in other words, provides a conceptual substitute for the black box that is implicit in the three traditional pedagogical theories (p. 522).

Astin's Theory of Involvement, in large part, shifts the focus away from what educators do, to what students do. The question is no longer how to teach students, but how to involve them.

Perhaps the most notable shift from these more traditional pedagogies to one of student involvement is that the institutional focus shifts from allocating scarce fiscal resources to that of allocating time for engagement. This is a fundamental shift for most institutions. If we are focused less on how much classroom time is being offered, and more on how that time is offered, we may be able to better help our students engage with their work and be more successful. Better understanding how students use their time and energy, and aligning our curriculums, programs, and interventions will allow us to work more efficiently and see better learning outcomes from our students.

As Astin (1984) points out early in his theory, a student's time has both quantitative and qualitative functions. In this way, not all student involvement is created equal. Astin (1984) notes that different environments of involvement have different levels of output. The most notable of these are residential communities. Residential students, unlike commuter students, are much more likely to be involved in extra-curricular activities, as well as have aspirations to persist to graduation. Other avenues of involvement that he highlights for their high level of return are involvement with fraternities and sororities, honors programs, academic involvement, student-faculty interaction, athletic involvement, and involvement in student government.

Perhaps the most interesting part of Astin's (1984) Theory of Student Involvement is that, despite its focus on student outcomes (particularly persistence) and it being so centered on involvement as the road to success, there is absolutely no mention of Tinto's work with social and academic integration. While it is hard to say why this may be, the parallels are relatively easy to see. Both authors identify the importance of students being connected to their institution both academically (primarily through personal interactions with faculty) as well as socially (through involvement in extra-curricular activities). For both researchers, a student's level of involvement leads to an institutional connectedness that fosters persistence.

Concept of Experiential Learning

In his book *Experience in Education,* Dewey (1938) lays out a concise and directed argument for the value of experience in education. While not condemning traditional education altogether, he does challenge the traditional idea of how students learn in a rapidly changing world.

Certainly in Dewey's lifetime, the rapid rise of modernity was evident. He would

have seen the United States rise up at the turn of the twentieth century with the advent of

mechanized factories and motor vehicles. For him, in this time of new technology,

education was lagging behind the times and not changing to meet new challenges and

opportunities. This is evident in how he describes how he believes schools in that time

defined learning:

> Learning here means acquisition of what already is incorporated in books and in
> the heads of the elders. Moreover, that which is taught is thought of as essentially
> static. It is taught as a finished product, with little regard either to the ways in
> which it was originally built up or to changes that will surely occur in the future.
> It is to a large extent the cultural product of societies that assumed the future
> would be much like the past, and yet it is used as educational food in a society
> where change is the rule, not the exception (1938, p. 19).

This concept of simply passing knowledge from elders or books along to the next

generation would, no doubt, be challenged over and over again in the coming decades,

particularly by Paulo Friere (1972) and his work disparaging what he called the 'banking

system' of education. In Friere's work, this system of education sees teachers and

educators as the source of knowledge that then 'deposit' that knowledge in the bank that

is their students. While this system is not inherently bad, it does set up students to simply

allow this deposit to happen without question or challenge. Friere (1972) believes there

is a value in a system that allows students to question the information they are being

given, not simply be passive recipients of it.

Dewey (1938) also believes that a passive system of education is not effective,

and instead suggests that we must find ways to encourage genuine and intentional

opportunities for students to learn through experience. These experiences allow students

to internalize and make connections to new knowledge that they may not be able to

simply through reading books or attending lectures. The key to the success of this theory of experiential education is creating experiences that are meaningful and educative.

Dewey (1938) acknowledges that not all experiences are created equal and must be seen on a continuum he calls "the category of continuity" (p.25). In this category, not all experiences engender learning or positive outcomes. Some experiences may create callousness and lead to building roadblocks to future learning (Dewey, 1938). He also points out that even if experiences do create new knowledge, that growth is not necessarily positive. His point of reference is that through increased experience, a burglar may very well become a better and more skilled criminal, but we cannot see that as positive growth. Instead he suggests we should provide experiential learning opportunities that grow students not only physically and mentally, but morally as well.

Perhaps the greatest argument for creating experiential learning opportunities is the introduction of collateral learning. Dewey (1938) states that one of the greatest fallacies of education is that students learn only what they are currently being taught. Some of the most enduring lessons and concepts a student may learn are often tangential to the intended lesson. While learning history, a student may not also build on their knowledge of geography or anthropology. Therefore, by creating opportunities for experiential learning, we create opportunities for students to learn a multitude of lessons and build on their previous knowledge exponentially.

Dewey (1938) believes this multi-dimensional growth of knowledge is possible when educators create experiences for their students that are intentionally designed and purposeful. He believes that the formation of purpose, while complex, involves:

> (1) observation of surrounding conditions; (2) knowledge about what has happened in similar situations in the past, a knowledge obtained partly by

recollection and partly from the information, advice, and warning of those who have had a wider experience; (3) judgment that puts together what is observed and what is recalled to see what they signify (Dewey, 1938, p. 69)

This means that, by its nature, creating purposeful experiences for learning requires a co-operative effort between students and teachers. Dictation of knowledge is replaced by a give-and-take relationship between educators and pupils. Knowledge and learning then becomes a reciprocal experience, with both parties learning from the other, and both building each other up.

Perhaps not surprising to some, knowledge acquisition from experience mirrors closely what we all know as the scientific method. In this way we come to a situation with an idea about it an outcome, a hypothesis on what the outcome may be. This could come from previous experiences, outcomes observed by watching others, or bias regarding a potential outcome. We can then conduct a test of our own to see if our idea holds up. After we have tested our idea, we must then analyze whether or not the outcome proved to be consistent with our original hypotheses. For example, if a person has a rock in their hand they may hypothesize that if they throw it at a window it will break the glass. They may have heard about others breaking glass with rocks, or seen other people break glass with rocks in the past. They can then test that idea by actually throwing the rock at the window. The outcome of that experiment, whether it broke the glass or not, is analyzed to see if it supports or challenges the hypothesis.

In this way our knowledge, and the expansion of that knowledge, is based not only on what we read, but what we experience when we make and test a hypothesis. These experiential learning opportunities force us to challenge our own previous worldviews. They force us to think critically and analyze how we may act in the future.

Dewey (1938) ends *Experience and Education* by acknowledging that his concept of education through experience is indeed not the simplest path to education. Creating intentional and purposeful experiences towards student learning is not easy, and requires work. In comparison, lectures and book learning methods are certainly much easier ways to teach. But if our goal is to help our students reach their potential, we must rise to the task and challenge ourselves to be better educators. However, if educators collectively commit to this new form of teaching, the process will only prove to get easier and less strenuous.

Area of Concern In Local Context: New American University

In order to truly understand any potential problems of practice at Arizona State University, one must first have a clear understanding of the university itself. Starting in July 2002, when Dr. Michael Crow took over as the new President of Arizona State University, the institution has taken a very advantageous and radical trajectory within higher education. Referring to itself as the New American University, Arizona State University is committed to measuring itself not by those it excludes, but by whom it includes and how those students succeed when they leave the institution (A New American University, 2015). In order to do this, the institution has undergone a dramatic reorganization and redesign in how students learn and engage with the university. The walls between the state of Arizona, the Phoenix community, and the university have been torn down in an attempt for the institution to better serve and be integrated into the community.

In doing this, Arizona State University has begun re-building around eight design aspirations laid out by Dr. Crow. These design aspirations are not only central to the

direction of the university, but are evident in the speeches and directives of high-ranking officials across the university. The design aspirations that guide this redesign are:

> 01. Leverage Our Place: ASU embraces its cultural, socioeconomic, and physical setting.
> 02. Transform Society: ASU catalyzes social change by being connected to social needs.
> 03. Value Entrepreneurship: ASU uses its knowledge and encourages innovation.
> 04. Conduct Use-Inspired Research: ASU research has purpose and impact.
> 05. Empower Our Students: ASU is committed to the success of each unique student.
> 06. Fuse Intellectual Disciplines: ASU creates knowledge by transcending academic disciplines.
> 07. Be Socially Embedded: ASU connects with communities through mutually beneficial relationships.
> 08. Engage Globally: ASU engages with people and issues locally, nationally, and internationally." (A New American University, 2015)

These design aspirations are particularly impactful when you consider that the community they desire to be embedded in and impact is the sixth largest metropolitan area in the United States.

Part of this re-design has also led to a new concept in openness and access to education for students. While maintaining reputable and nationally recognized programs and research facilities, Arizona State University has also swung open the doors of higher education open more than almost any other state university. With an acceptance rate of eighty percent, Arizona State continues to bring in larger and larger incoming classes of students. With over 83,000 students enrolled, Arizona State has become the largest public research university in the United States under one administration (ASU Quick Facts).

While there are many great things that come from creating so much access to higher education, it has not come without growing pains. The university has increased its total full-time enrollment from 67,000 to 83,000 in just the past six years. This rapid

growth has brought with it greater needs for student support services such as housing, dining, academic and career advising, as well as student organization support. In many ways, the university is still navigating how to manage its rapid growth in ways that best support and empower its students.

Theoretical Framework

Social Cognitive Theory

Social Cognitive Theory, as developed by Albert Bandura, suggests that most human behavior is purposive and regulated by forethought (Bandura, 1991). Because humans cannot predict the future, the events to come cannot be used as motivators for action. However, humans can preconceive outcomes and convert those conceptions to motivate and regulate their actions in the present (Bandura, 1991). These preconceptions can be goals or anticipated outcomes that act as incentives to drive behavior and actions. In Social Cognitive Theory, it is asserted that human behavior is not entirely regulated by outside sources, but are controlled through self-reflective and self-reactive actions that control thoughts, feelings, motivation, and action (Bandura, 1991. p. 249). This ability to be self-directed means that human behavior is "regulated by an interplay of self-generated and external sources of influence" (Bandura, 1991, p. 249).

In Social Cognitive Theory, human behavior is looked at largely in a transactional way where human agency is said to be "an individual's capacities to generate and direct actions for specific purposes, emphasizing the important role of intentionality in purposive behavior" (van Dinther, Dochy, & Segers., 2011. p.96). When looked at in relation to student academic outcomes, Social Cognitive Theory and its derivatives, like Social Cognitive Career Theory, are seen as positive predictors of future success and

persistence. Still, it is rarely intentionally integrated into persistence intervention programs (Kahn & Nauta, 2001).

Self-efficacy is the belief in one's own ability to execute a specific function or task. These beliefs may influence what tasks a person is willing to engage in and which ones they are not, as individuals are much more likely to choose an activity in which they believe they will be successful (Pajares, 1996). A person's level of self-efficacy will also help to determine the level to which they will stick with a given task, how much energy they will expend to complete it, and how resilient they will be when confronting obstacles (Pajares, 1996). Because of this, self-efficacy beliefs are strong predictors on what a person will be able to accomplish.

It should be noted that self-efficacy is not based on an individual's ability to actually accomplish a specific task, but rather their own perception of their ability to do so. These perceptions of future success may be influenced by environmental or other pressures and are known to change over time. Self-efficacy is often location and situation specific (Parajes, 1996). Because of this, self-efficacy, if being used as a predictor, should be looked at longitudinally and not measured at a singular point in time.

In Social Cognitive Theory, learning is seen as "knowledge acquisition through cognitive processing of information . . . the social part acknowledges the social origins of much thought and action . . . whereas the cognitive portion recognizes the influential contribution of thought processes on human motivation, attitudes, and actions" (Stajkovic, & Luthans, 1998. p. 63). This combination of environmental and personal generation of behavior is what the concept of self-efficacy, and the ability to increase one's self-efficacy, is largely built upon. By increasing a student's self-efficacy, we

increase their capacity to succeed in multiple environments and situations and create a confidence that they will complete and succeed in the task at hand. It has been shown that students who have higher levels of self-efficacy in academic tasks are more likely to use more cognitive strategies and persist longer than those with lower levels of belief in themselves (Pajares, 1996).

As student self-efficacy grows in relation to a task, it in turn leads to greater confidence and self-esteem to complete larger and more complicated tasks and may lead to increased perseverance. While self-esteem differs from self-efficacy in that the former is concentrated more on a person's feelings about themselves and the latter is focused on a person's internal judgments of their own capacity to complete a task, they are very much related and work to build on one another (van Dinther, et al., 2011).

Other concepts within Social Cognitive Theory that must be considered in the creation of student self-efficacy are 'self-concept' and 'locus of control'. Self-concept refers to an individual's perception about themselves within the academic setting (Ferla, Valcke, & Cai. 2009), while locus of control refers to whether or not an individual believes that they have control over the circumstances of their life (van Dither, et al, 2011).

Student self-efficacy can be built from four main sources that include: enactive mastery experiences, vicarious experiences, verbal persuasions, and physiological arousal (van Dinther et al., 2011, Stajkovic, & Luthans, 1998). Enactive mastery experiences are a direct result of succeeding in a challenging task (Stajkovic, & Luthans, 1998). Simply completing the task does not necessarily result in an increase in self-efficacy, but how the individual processes and internalizes the successful completion is more important. If a

student completes a task and believes that it is through their own effort, they are more likely to see an increase in self-efficacy than if they believe circumstance of luck played a role in their success. Vicarious learning occurs when students observe competent individuals, who are like themselves, and successfully complete tasks that, in turn reinforce their own ideas and conceptions of their own abilities (Stajkovic, & Luthans, 1998). Vicarious learning is an important antecedent to growth in self-efficacy, as it is not always possible for students to engage in enactive mastery experiences. Verbal persuasion is less about a student's ability to complete a task or feeling about a task, but rather the verbal reinforcement that increases their belief that they have the necessary skills to accomplish a task (Stajkovic, & Luthans, 1998). While this can be a way to build self-efficacy, it more often serves to positively reinforce existing self-efficacy. Finally, physiological arousal (also sometimes referred to as psychological arousal or emotional arousal) comes from a student's ability to not simply perform a task successfully, but to do so while under pressure. A student may see a stressor or pressure as a positive motivator that leads directly to increased adrenaline and motivation, while others may see stress as a debilitating factor that leads to decreased output and a lowered confidence in the task performed (Stajkovic, & Luthans, 1998).

Through understanding this model, we are able to begin to formulate new ways to influence student behavior and outcomes. While all four of these factors are important and must be considered as essential elements in building a student's self-efficacy, focusing on mastery experiences will likely give us the greatest returns. These experiences, because they are based on personal achievements, provide students with the most tangible and authentic concept of their own capabilities (van Dinther et al, 2011).

Because of the importance of all four of these concepts, all will have a place in my design for action, which will be laid out more specifically in a later chapter.

What separates Social Cognitive Theory and other theories on college persistence is that it is not dependent on a student's level of self-efficacy when they arrive at school. So much of the previous work and research has focused on student readiness and academic preparedness when they arrive on campus. Gore (2006) found that a student's incoming level of self-efficacy was not a predictive measure of persistence, but that a student's level of self-efficacy at the end of year one was a positive predictor. This is encouraging for those at institutions of higher education, because it gives us encouragement that we can be in greater control of student persistence and outcomes. For too long, institutions have blamed forces external to themselves by saying students were not ready for the academic rigor of college or that they were not emotionally prepared to leave home. While these are factors that must be acknowledged and cannot be dismissed, knowing that higher education educators can create experiences on campus that can increase persistence in spite of outside influence should be empowering.

Self-Determination Theory

Self-Determination Theory is an approach to motivation that recognizes the importance of a person's (student's) inner-resources for development and behavior regulation (Ryan & Deci, 2000. p. 68). Through empirical study, this theory identifies the need for competence, relatedness, and autonomy in social development and personal well-being (Ryan & Deci, 2000).

Self-Determination Theory examines not only the factors that not only positively affect motivation, but also those that may hinder or impede social functioning and

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motivation (Ryan & Deci, 2000). Motivation, as it is defined by Ryan & Deci (2000), is energy, direction, persistence, and all other aspects of activation and intention (p.69). Motivation is not a singular concept and can come from a variety of sources and with a variety of intentions. People's motivation may be genuine and self-designed or it may be the product of coercion or outside motivators. Authentic motivations that come from within oneself, and is by its nature more personal, create more interest, excitement, and confidence than those motivations that come from an external force or influence (Ryan & Deci, 2000). With this in mind, by focusing on creating an internal self-generated motivation within a student to persist toward graduation, we are much more likely to see that student succeed.

Intrinsic motivation, more than any other phenomenon, shows us the positive potential of humans, their likelihood to seek out challenges, and their desire to push their own capacity (Ryan & Deci, 2000. p. 70). This type of motivation epitomizes human desires to be vital and to explore the world around us. In spite of this natural motivation inside of all of us, it is crucial to both maintain and enhance our intrinsic motivation so that we can avoid its disruption. Because of this, Self-Determination Theory chooses not to focus on the cause of intrinsic motivation, but rather looks at the ways in which to enhance and sustain such motivations (Ryan & Deci, 2000). Similar to self-efficacy, intrinsic motivation is built through positive performance and feedback related to challenges a person experiences. While self-efficacy is largely built through successful enactive mastery experiences, intrinsic motivation is more likely to be built through positive performance feedback (Ryan & Deci, 2000, Stajkovic & Luthans, 1998, van Dinther et al., 2011).

Because of its added reliance on outside or environmental factors, intrinsic motivation is more likely to be threatened by outside motivations or rewards. Be it rewards, deadlines, threats, or directives motivators that added pressure to a subject led to a decreased feeling of autonomy (Ryan & Deci, 2000). Autonomy is important, as it allows the subject (or in our case student) to internalize the experience and create a positive relationship between their motivation and their outcome. Students given a chance to exercise more autonomy are more likely to build a sense of intrinsic motivation and push themselves than those who are taught under more restrictive conditions (Ryan & Deci, 2000).

Environments that support a student's autonomy, as well as their competence and relation to the larger community, allowed for even extrinsic motivations to have positive effects on people's feelings of integration within the larger community context. In turn, this leads to an increased feeling of commitment, effort, and quality performance (Ryan & Deci, 2000). Since institutions cannot control or always know a student's motivations, it is important that they build communities on their campuses that allow for and encourage autonomy of our students. By doing so, they are more likely to create an environment that increases persistence for all students, not just those intrinsically motivated to succeed.

Experiential Learning Theory

Developed by Kolb (1984), Experiential Learning Theory provides a holistic framework for adult development that emphasizes the role experiences play in the learning process (Kolb, Boyatzis, & Mainemelis, 2001, Kolb & Kolb, 2008). The theory

itself makes six propositions that integrate earlier work of Dewey, Piaget, and Lewin

(Kolb, Boyatzis, & Mainemelis, 2001, Kolb & Kolb, 2008). The six propositions are:

1. Learning is best conceived as a process, not in terms of outcomes. . .
2. All learning is re-learning
3. Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world
4. Learning is a holistic process of adaptation
5. Learning results from synergetic transactions between the person and the environment
6. Learning is the process of creating knowledge (Kolb & Kolb, 2008)

Experiential Learning Theory sees knowledge acquisition as a cycle that works to

challenge the learner to recall previous experiences, test new hypotheses, and assess the

results of the most recent action. In Kolb's (1984) terms, these processes are:

experiencing, reflecting, thinking, and acting.

Because of the cyclical vision of learning in Experiential Learning Theory, each

action is a response based on what was learned in a previous experience (Kolb & Kolb,

2008). Knowledge begins with reflection on 'concrete experiences' a person has. These

'reflective observations' are then collected and used to create 'abstract concepts' that

allow for new conclusions to be drawn. These conclusions must then be 'actively tested'

to then generate new 'concrete experiences', thus starting the cycle over again (Kolb &

Kolb, 2008).

Figure 6

Kolb's (1984) Model of Experiential Learning

Central to the ability for this theory of learning to exist is the idea that at all stages the student or learner is reflecting on what has happened. It is the dialogue between action and reflection that opens the door to new learning (Kolb & Kolb, 2008).

As one looks at the cycle Kolb (1984) outlined, it is notable that each stage has a polar opposite (Kolb, et al, 2000). Abstract concepts are the opposite of concrete experiences, just as reflective observation is the opposite of active experimentation. All students enter into this cycle with strengths in one, or possible two, of these steps, but rarely three or four. The analysis of this phenomenon has lead to the Theory of Learning Styles as well as personality types (Kolb, et al, 2000).

For anyone familiar with the work of Lewin and The Lewinian Model of Action Research, the parallels are quite striking. While focused more on a theory of laboratory research methods, Lewin's model involves four very similar parts of the cycle (Kolb,

1984). Unlike the Experiential Learning Theory, Lewin focused on creating a feedback process that would lead to increased effectiveness in both individuals and organizations (Kolb, 1984, p. 22).

Dewey's theories (as described earlier) focused on the role of experiences in the learning process. While similar in many ways to the Lewinian model, Dewey focused less on the organizational outcomes and more on the developmental potential of the process. Dewey (1938) believed that learning could occur when an experience had a strong and positive purpose. For an experience to have purpose it must have:

> (1) observation of surrounding conditions; (2) knowledge about what has happened in similar situations in the past, a knowledge obtained partly by recollection and partly from the information, advice, and warning of those who have had a wider experience; (3) judgment that puts together what is observed and what is recalled to see what they signify (Dewey, 1938, p. 69)

The final theorist Kolb integrates into his Experiential Learning Theory is Piaget (Kolb, 1984). For Piaget, concepts, reflections, and actions form the basic continuum of development throughout adult life (Kolb, 1984, p. 23). Piaget's model is less about individual experiences as learning, but focuses on the balance a person must make between how they have come to see the world from their experiences (accommodation) and an accepting of outside concepts and knowledge into their experiences (assimilation).

For Lewin, Dewey, Piaget, and later Kolb, there needed to be a point in time where previous experience must be reflected on and analyzed. The key to making progress, be it in the laboratory or the classroom, came from a decision to learn from the past and not make similar mistakes or decisions in the future.

Perhaps the most important concept within Experiential Learning Theory is that learning must be seen as a process, not an outcome (Kolb, 1984). Knowledge, therefore,

is not fixed but is in constant flux. It is formed and re-formed through experiences in a

person's life (Kolb, 1984). If this is true, then education is no longer simply about a

transmission of data, but a stimulation of inquiry that allows for students to test

experiences on their own.

Kolb (1984) summarizes his theory by stating that learning must be active and

self-directed (p. 36), and in order to do this, learners must be prepared with a certain skill

set:

> New knowledge, skills, or attitudes are achieved through confrontation among
> four modes of experiential learning. Learners, if they are to be effective, need
> four different kinds of abilities- concrete experience abilities (CE), reflective
> observation abilities (RO), abstract conceptualization abilities (AC), and active
> experimentation abilities (AE). That is, they must be able to involve themselves
> fully, openly, and without bias in new experiences (CE). They must be able to
> reflect on and observe their experiences from many perspectives (RO). They
> must be able to create concepts that integrate their observations into logically
> sound theories (AC), and they must be able to use these theories to make
> decisions and solve problems (AE) (p. 30).

Kolb (1984) teaches us that to fully understand learning we must first understand

knowledge (p. 38). If we are to dedicate ourselves to teaching, we must dedicate

ourselves to creating environments that are open and allow for the process of learning to

take place. If knowledge is no longer viewed as a transmission of information, but rather

a transformation of information, when then must rethink how we set out to educate our

students.

Synthesis

The concept of involvement as framed by Astin (1984), and particularly the focus

on quality involvement, creates a direct correlation to student-to-student connections. It

is my proposition that increasing a student's level of self-efficacy will lead to persistence

beyond the second year of college. As was discussed previously, student self-efficacy

can be created through vicarious interactions their peers (van Dinther, et al, 2011). This student-to-student connection creates high levels of quality engagement that can produce a high probability of also creating situations in which learning opportunities that build a student's self-efficacy can be built.

Perhaps more importantly, connecting students to staff and faculty through increasingly intentional social or academic involvement will create scenarios primed for hands-on learning opportunities (enactive mastery experiences) to take place. Because these experiences lead directly to the building of a student's self-efficacy, the importance of these interactions will be paramount to the process.

Using Astin's (1984) Theory of Involvement alongside Bandura's (1991) Social Cognitive Theory, an increase in student self-efficacy will result. Through a lens of Ryan and Deci's (2000) Self-Determination Theory, this increased self-efficacy can be used as the foundation for increased motivation to persist to graduation. The most efficient and meaningful way to connect these two constructs is through using experiential learning (Kolb, 1984).

When looking at the theories of Bandura (1991), Ryan and Deci (2000), and Kolb (1984) together, we see that they share a very similar cyclical format that allows for increases in self-efficacy, motivation, and learning through a process of building on knowledge from previous experiences and synthesizing them to inform future action. With such a clear overlap in concepts, a curriculum built on these theories will not only lead to higher persistence, but greater learning outcomes.

Chapter 3

Test Study

Methods

This chapter explains a small scale, low cost, high feasibility study. The core research questions were: Does a change in college self-efficacy predict attrition? Does a small intervention decrease attrition? In order to find the relationship between second-year persistence and student self-efficacy, a small study of second-year, sophomore level students at Arizona State University was conducted.

Sample

The populations of interest for this study were students who had achieved sophomore level status and were in their second year of matriculation as of January 2015. This sample pool is by design very narrowly identified. With the rise of incoming students having had access to pre-college or advanced placement coursework in high school, their status as a sophomore no longer necessarily designates them as a second-year student. Because the study was hoping to find predictors for retention between the second and third year of matriculation, it was important that the pool of respondents be both sophomore level and in their second year.

Eligibility requirements excluded both students who had transferred into the institution after their first year, as well as those who were in their second year but are not academically on-track. This decision is an intentional one, as students who were new to the institution or who may have been falling behind academically may have had a series of other issues that may affect their decision to persist to their third year. These additional

variables were not being controlled for in the experiment, and therefore these potential

respondents were excluded.

Students who met these qualifications were sent an email to participate in the

study. The desired sample size was 60 respondents, 30 each for the low dosage and high

dosage groups. At 30, there is enough power to test for basic Fisherian statistical

significance. Student's were contacted and asked to participate via email in the first part

of the semester from Spring 2015. The students were also offered the chance to win a gift

card to Amazon for their participation. Once a student agreed to participate, the student

was assigned to the first or second group at random. A copy of this email request is

attached (see Appendix A). A letter of informed consent (Appendix B) was provided to

the students who were willing to participate.

Design

This study used a one within one between one-way analysis of variance design

with three groups. The first group was based on current data from the State of Arizona on

matriculation continuation from sophomore to junior year and acts as a pure control

group and point estimate testing group. The second and third groups consisted of

randomly selected and randomly assigned sophomores. The second group was asked to

complete a self-reported self-efficacy instrument two times, i.e., a pre- post format and

formed the low-dosage experimental group. The third group was asked to take the same

instrument twice and was contacted during the intervening period to see if their level of

self-efficacy fluctuated or remained the same and formed the high dosage group. Both the

second and third groups were asked to identify if they intend to enroll for classes in the

Fall 2015 semester near the end of the study

The control group data for this study was publicly available from the State of Arizona in the Integrated Postsecondary Data System (IPEDS), as well as documents produced by Arizona State University's Office of Institutional Analysis. This information is available online in the IPEDS database system, as well as retrievable from the university's institutional research department. This information will consist of enrollment data for the university as a whole, attrition rate after each academic year, and four and six year graduation rates.

Instrument

The instrument (Appendix C) chosen for this study is the College Student Self-Efficacy Inventory (Solberg, O'Brien, Villareal, Kennel, & Davis, 1993). This instrument has been used as a baseline for evaluating college student's academic self-efficacy (Gore, 2006) and has been tested for validity and accuracy (Barry & Finney, 2009). It is a 20 question Likert-scaled instrument that takes approximately 8 minutes to complete. The inventory was taken online and administered behind the university's firewall to ensure protection of information, and so the students could be verified. The 20 items load into three factors: Courses, Roommates, and Social. There is currently some debate in the literature about which items should be kept on which factors, but I chose to use all 20 for the three factors. The internal consistencies are all research quality, i.e., > .70.

Procedure

The College Self-Efficacy Inventory (Solberg, O'Brien, Villareal, Kennel, & Davis, 1993) was administered using Google Survey. Because Arizona State University allows for Google Documents to be housed behind its secure firewall, only people with

ASURITE IDs were able to access the survey. Using their ASURITE, or ID number, I was able to verify that they are eligible to participate and fit the target demographic. The window for the pre-test and post-test was left open for 10 business days, or two school weeks, in order for students to have ample time to complete the assessment.

Students participating in the two groups were informed that the instrument was open and available via email, prompting them to log in and fill out the survey.   While allowing students to log in and participate when it was convenient for them may have increased the likelihood of participation, it may also have lead to lowered response rates from the low dosage group, who may forget to input their data during one or several of the collection periods. The voluntary nature of participation may also have lead to decreased participation over time.

Timeline:

February:
- Recruit Participants

March:
- Low-and High-dosage Participants took CESI first time (Pre)

April:
- High Dosage answered Mid-Point structured questions through email.

May:
- High Dosage answered end-of-semester questions through email.
- Low- and High-dosage participants took CESI second time (Post-Test)
- Gift cards are randomly chosen and winners are told
- Data set was cleaned of study ID code.

Analysis

The core research question was answered with a logistic regression that was run with returning or not returning as the binary dependent variable, experimental group status as the independent variable, and post-self-efficacy score as the covariate. The hope

was to provide a basic answer to what efficacy and what types of experimental group predicts retention. In addition, the change in self-efficacy scores were also examined within and between the two experimental groups, with a one-within (pre-post) one-between analysis (low vs. high), in an attempt to understand if the minimal contact is associated with a change in general college self-efficacy. Finally, a point estimate comparison between the return rates of the two experimental groups and the publicly available proportion was completed.

One-within / one-between analysis of variance (ANOVA) was chosen as the method of analysis, as traditional t-test's are restricted to only two groups (Dytham, 2011). This form of analysis pre-supposes that the data collected is continuous and is normally distributed among the larger population, so as to give valid information (Dytham, 2011). In this way, it is assumed that variance among the respondent groups will be representative of variance among all populations within that group. As with all uses of one-way ANOVA post-hoc testing will be required if there are any significant relationships among the three groups and enrollment for the Fall of 2015. This must be done in order to identify which of the three groups is a significant predictor of persistence.

Limitations

There were several limitations to this experiment that may affect its validity and reliability. These limitations include: sample size, length of experiment, history, and inability to control for outside factors.

Sample Size

Shadish, Cook, & Campbell (2001) show us that the limitations of almost all studies are their limited size and scope. While most studies or experiments are highly localized, they attempt to make a generalization that extends beyond the local context. Until my study can be replicated at multiple universities in multiple locations, the results must be seen as unique to Arizona State University. Despite the desire to have 30 respondents per experimental group, only 19 students completed the full research process (28 respondents participated in the initial pre-test). With the context of Arizona State, using a sample size of 14 respondents per dosage group (based on initial respondent numbers) does meet the minimum requirements to be seen as representative of the larger population, or for Fischerian statistical significance. Without a larger group of respondents, it was difficult to ensure that the students in the study were representative of all courses of study and students at the university.

Length of Experiment

Because the experiment was limited to one single academic semester, it was not able to see if student's self-reported self-efficacy naturally increases or decreases during certain parts of the academic year or semester. Knowing this may allow researchers to not misinterpret the levels of student's self-efficacy. Extending this experiment over two years, from the time a student first enters the university, would allow for better understanding of whether decreases in self-efficacy in the student's second year are abnormal and do affect student attrition.

History

With limited knowledge of the respondents, the research could not reflect on prior academic difficulties or other factors that may also lead to attrition. In the same way, the experiment did not control for prior knowledge that the students may bring with them from previous schooling that would potentially increase their academic self-efficacy. While academic self-efficacy made up only a portion of the total self-efficacy score, it is important to account for. Finally, the experiment did not account for any historical interactions that students may have had with faculty members. These previous experiences could influence a student's self-efficacy, either positively or negatively, depending on the previous interaction.

Lack of Controls on Outside Factors

The inability for this experiment to control for all outside factors that may affect a student's choice to return in the Fall may have lead to false positives. There are many factors outside of student self-efficacy that may influence a student's decision, including: family issues, financial concerns, health issues, or other opportunities. Shadish, Cook, & Campbell (2001) discuss the threat to external validity caused by asserting causal generalization as extrapolation. In much the same way, we are cautious to assert findings onto a larger population after a study on a small sample group, we must be careful to not factor in other elements that may affect our outcomes. Only through repetition of this experiment can we begin to assert patterns or trends that may lead to more firmly held conclusions.

Results

A list of 1,000 student emails was purchased from the ASU Registrar's Office, all of which fit the sample population description mentioned earlier. From that list, 28 students responded to the email request to participate and completed the initial pre-test. A final sample size of 14 for the high dosage group and 14 for the low dosage group was used in this study.

The results from the responses to the survey gave no reliable data. The high dosage group saw a net decrease in self-efficacy, but none of the differences were statistically significant (see Table 1). In addition, out of the sample, only two have not signed up for classes in the fall, which is higher than the normal rate at ASU. The final sample sizes were not large enough to conduct other planned analyses.

While this particular study did not reveal any statistically significant correlation between levels of student self-efficacy and persistence into the third year, more research is required to identify if this is in fact the case. The number of respondents in this study was so small that they did not constitute a sample size that can reflect relevant data. Future studies that include larger sample sizes must be done in order to definitively prove if there is a connection between student self-efficacy and persistence in second year students.

Analysis

Analysis of the final results shows that in two of the three categories of questions (roommate and social self-efficacy), the median self-efficacy score of both the high

dosage and low dosage group actually went up over the course of the semester. Only student's self-efficacy in relation to their course work showed a median decrease.

Despite this, the belief that increased intervention and measurement of the high dosage group may result in a 'halo' effect, increasing student's awareness of their own self-efficacy, and therefore raising their self-efficacy was shown to be false. In all three categories, students in the high dosage groupsaw a decrease in their self-efficacy scores over the course of the semester. This may indicate that increased awareness and questioning of a student's level of self-efficacy may lead them to have lowered conceptions of their self-efficacy, as opposed to raised conceptions.

Finally, the final analysis showed that all but two of the students participating had registered for classes for the following Fall semester. This percentage of persistence is higher than the median persistence rate of all second-year students, indicating that this sample size may not have been large enough to fully capture the student body as a whole. I also believe that since participation in this study was voluntary, and with no sanctions for not completing or not participating, students who did fully participate in the study from beginning to end may be students who are more likely to persist with their school work, as well. Students who were invested enough in their experience to participate in this study are potentially also more invested in staying involved with their academic pursuits.

Table 1

Descriptive Statistics

	Exper = 1	Mean	Std. Deviation	N
Course-Pre	.00	74.7500	10.66963	12
	1.0	78.8333	10.99848	6
	Total	76.1111	10.63783	18
Course-Post	.00	77.1667	9.47565	12
	1.0	71.1667	17.76982	6
	Total	75.1667	12.62700	18
Roommate-Pre	.00	31.2500	7.94441	12
	1.0	32.0000	6.00000	6
	Total	31.5000	7.18045	18
Roommate-Post	.00	34.4167	3.80092	12
	1.0	28.0000	8.31865	6
	Total	32.2778	6.27606	18
Social-Pre	.00	41.8333	9.73124	12
	1.0	47.5000	6.18870	6
	Total	43.7222	8.94957	18
Social-Post	.00	46.5000	8.10724	12
	1.0	44.000	11.83216	6
	Total	45.6667	9.22911	18

Chapter 4

Post Study: Design for Action

Self-efficacy as a predictor of persistence

Empirical evidence shows that student's self-efficacy is strongly linked to student achievement, learning, and motivation, and may be a strong predictor of future performance and persistence (van Dinther et al, 2011; Ferla, Valcke, & Cai, 2009; Gore, 2006). Central to Social Cognitive Theory is that idea that high levels of self-efficacy determine what tasks an individual will undertake, and to what level they will expend energy in order to accomplish that task (Gore, 2006). While there certainly are a variety of predictors that indicate whether or not a student will persist (high school GPA, first semester GPA, and second semester GPA), a student's self-efficacy is the only factor to remain relevant after the first year of study (Kahn & Nauta, 2001).

Social Cognitive Theory, and more specifically the off-shoot of Social Cognitive Career Theory "suggests that in addition to academic ability/past performance, persistence is influenced by a student's confidence in his our her academic ability (termed self-efficacy), the anticipated consequences of persisting and graduating (known as outcome expectations), and the determination to persist and graduate (performance goals)" (Kahn & Nauta, 2001, p. 635). The link between a student's self-efficacy and their outcome expectations and performance goals are shown to be strong through meta-analyses conducted by Multon, Brown, & Lent (1991).

Knowing that student self-efficacy is so closely linked to future outcomes, it makes sense that institutions would look to build student self-efficacy at every opportunity when students arrive on campus. As was previously mentioned, self-efficacy

cannot be accurately measured in a single moment in time, but rather must be measured over time while taking into consideration context and external factors. Because of this, measuring a student's self-efficacy prior to or upon their arrival is difficult and has not been shown to accurately predict a student's ability to persist (Kahn & Nauta, 2001). Since self-efficacy fluctuates over time, it is important that whatever interventions we decide to use to build student self-efficacy are longitudinal and not isolated in time or place.

Perhaps the most encouraging discovery from the research of van Dinther et al (2011) was that student self-efficacy could be influenced through educational interventions. Their study showed that student self-efficacy was positively influenced by their designed interventions eighty percent of the time, and of those successful interventions, those based on social cognitive theory showed the highest rate of increase.

Self-efficacy as a pathway to intrinsic motivation

Student self-efficacy is indeed an important piece of the puzzle in regards to student success, but simply building their level of efficacy will not lead to improved outcomes on its own. It is when we begin to overlap the outcomes of social cognitive theory with the inputs of self-determination theory that we begin to see the true potential of both. The goal then is to shift a student's academic experience away from being one that is extrinsically motivated by grades to one that is intrinsically motivated by their own desire to learn, grow, and contribute to society.

Deci and Ryan (2000, 1980) discuss that in order for a task to become intrinsically motivated two things must happen. The first is that the student must feel that their locus of control is internal as opposed to external. This perceived locus of control is

diminished through the use of deadlines, evaluations, and external motivators (Gagnè & Deci, 2005), and increased through in the student's ability to make choices that influence their outcomes. The second factor is that they must have feelings of competence related to the task at hand (Gagnè & Deci, 2005). Allowing students to take part in challenging activities lead to increased competence and are often more intrinsically motivating (Gagnè & Deci, 2005). This level of competence can also be increased by positive feedback received while completing the task. In this way, I believe that the core description of competence mirrors that of self-efficacy in many ways. One's level of both self-efficacy and competence increase with the completion of a difficult task and lead to increased feelings about what tasks one can complete in the future.

Increasing a student's self-efficacy will also lead to an increase in their competence. This increased competence can begin to positively influence a student's likelihood of shifting from a place of extrinsic motivation to one of intrinsic motivation. The design for action I am proposing also looks to increase student's perceived locus of control through building in options of choice and the ability to connect beyond the classroom.

Social Cognitive Theory gives us a pathway to creating a sense of self-efficacy. For many, perceptions of one's capabilities play a strong role in their future motivation (Pajares, 1996). If they are not self-motivated and curious, or if they do not desire to master new skills or apply their talents, then no amount of self-efficacy will make them successful or encourage them to persist.   A student's present motivation is not controlled by future events, but rather by their perception of what potential outcomes the future may hold. These outcomes, particularly if they are desirable, lead to motivation that regulates

future behavior (Bandura, 1991). Studies have shown that instructing low-achieving students to set proximal and attainable goals will lead to increased self-efficacy and academic success (Zimmerman, Bandura, & Martinez-Pons, 1992).

Two of the concepts within Social Cognitive Theory that must be considered in the creation of student self-efficacy are self-concept and locus of control. Self-concept refers to an individual's perception about themselves within the academic setting (Ferla, Valcke, & Cai, 2009) while locus of control refers to whether or not an individual believes that they have control over the circumstances of their life (van Dinther, et al, 2011). Self-concept theorists identify that a person's confidence in their future success, as well idea of self worth, are key to positive self-concept (Zimmerman, Bandura, & Martinez-Pons, 1992). Because of this, self-efficacy is seen as a strong indicator of positive self-concept, and is consequently one of the four dimensions used when measuring self-concept (Pajares, 1996). Locus of control, or autonomy, is important as it allows a student to internalize their experience and create a positive relationship between their effort and their outcome. The more autonomy students are given, the more likely they are to build a sense of intrinsic motivation and push themselves further (Ryan & Deci, 2000).

While institutions would like to create a sense of intrinsic motivation for all their students, they must realize that is not always possible. Institutions should not simply focus on creating intrinsic motivation but also look at how to use extrinsic motivators in order to help students persist. Student's who enter the university as high achieving may not need further motivation to persist, as they are self-motivated to begin with, but for students whose motivation to enter into higher education is not internal or is prompted by

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the desire of significant others (family or friends), it is important that institutions find a way to effectively use what motivation a student has in order to create a sense of belonging and relatedness to the institution (Jackson, 2002).

Ryan & Deci (2000) contend that creating autonomous environments is the way to this. In order to understand how this is possible, one must not see autonomy as being in contrast to being part of the community. Autonomy and individualism do not imply low levels of relatedness to their community, and within Self-Determination Theory they are not related to being detached from the community, but instead, having a feeling of volition that accompanies one's actions (Ryan & Deci, 2000, p. 74).

Cognitive Evaluation Theory, a sub-theory of Social Cognitive Theory, suggests that external forces such as deadlines, rewards, and evaluations lead to diminished feelings of autonomy and impact a person's perceived locus of causality from internal to external (Gagnè & Deci, 2005). This shift away from internal control can undermine a person's intrinsic motivation when it comes to a specific or group of tasks. Conversely environments that encourage a person's perceived locus of causality can lead to an increase in intrinsic motivation (Gagnè & Deci, 2005).

Cognitive Evaluation Theory also suggests that a feeling of autonomy is not enough to encourage intrinsic motivation, but a person must also feel competent that they can complete the task at hand. The competence necessary for this to take place is built through successfully completing challenging tasks and positive feedback (Gagnè & Deci, 2005). In this way, I suggest that the competence described in Cognitive Evaluation Theory is closely linked to, if not the same as, self-efficacy. At the very least self-

efficacy is an indicator of a person's (or in this case, student's) level of competence when it comes to a specific task, or set of tasks.

As we look at student retention, and particularly student retention into the third year, why should we be concerned with a student's motivation, or more specifically, if their motivation is intrinsic versus extrinsic? Should we only be concerned that they are motivated, and not worry about the source of that motivation? To this question, I suggest that it is very important, and that by helping a student shift their motivation from one that is extrinsic to one that is intrinsic in nature, or at the very least an integrated extrinsic motivation, we are much more likely to see students who are not only successful but, students who will persist.

As has been stated previously, a student's competence and sense of autonomy are the crucial building blocks for building higher-order motivation. Additionally, we must understand the role of relatedness. It is this third component that allows a student to internalize their competence and autonomy and feel integrated into their stated task (Gagnè & Deci, 2005). These three components, when measured daily, have been shown to also increase one's level of well being (Gagnè & Deci, 2005).

Knowing the relationship of autonomy, competence, and relatedness to not only the motivation of a student, but the overall well-being of a student, we can then begin to create environments on campus that both encourage and promote growth for our students in these areas. In looking more specifically at work environments, Gagnè and Deci (2005) state the following:

> [C]limates that promote satisfaction of the three basic psychological needs will enhance employees' intrinsic motivation and promote full internalization of extrinsic motivation and that this will in turn yield the important work outcomes of (1) persistence and maintained behavior change; (2) effective performance,

particularly on tasks requiring creativity, cognitive flexibility, and citizenship behaviors; and (3) job satisfaction; (4) positive work-related attitudes; (5) organizational citizenship behaviors; and (6) psychological adjustment and well-being. (p. 337)

While they may be specifically looking at workplace environments, I strongly believe their stated outcomes are consistent with those in educational settings. Educational environments that encourage and create autonomy, competence, and relatedness, in turn, are environments with high levels of citizenship, high performance, and satisfaction. This then must be the goal of the networked improvement community; to create an environment that promotes these psychological needs.

Co-curricular activities towards self-efficacy building

One of the best tools we have on our college campuses today, and in particular Arizona State University, are our co-curricular activities. Clubs, organizations, and other activities outside the traditional academic setting are well positioned to be builders of student self-efficacy and increased motivation for students who participate in them. Gore, (2006) explicitly states that involvement in student organizations and campus activities build student's academic and pro-academic self-efficacy (p. 112).

Astin (1984, 1993) and Tinto (1993) both discuss in their work the importance of involvement in relation to student retention. We know that students who get involved on campus are significantly more likely to be successful in the classroom and persist to graduation. Certainly part of the success students see from being involved is related to being more socially integrated with the campus. Astin (1984, 1993) and Tinto (1993) both note the importance of the social inclusion in student success. However, I would assert that the success of students who get involved is not related only to their social

integration on campus, but also the benefits of increased self-efficacy and the positive motivation that comes with it.

Co-curricular programming has a very distinct ability to build student self-efficacy. While certain experiences allow for growth in one or two of the ways in which self-efficacy is built according to Social Cognitive Theory, co-curricular programs can provide for all four. Clearly the ability to put student's classroom learning into real life, hands on, situations lead students to create enactive mastery experiences. But, being part of an organization or group outside the classroom also allows for students to watch others like themselves be successful in their pursuits. This gives students the confidence that they, too, can be successful (vicarious learning experiences). Working in this same team often involves building relationships with peers and advisors that provide for students the positive feedback that leads to verbal persuasion. Finally, students build self-efficacy through physiological arousal, because many of the tasks they are asked to perform within their student clubs or organizations are time bound, and require them to meet deadlines and work under pressure. This added stressor could lead to an increased feeling of competence and efficacy when they are successful in their task.

First-year experience programs across the country have seen great success in increasing retention numbers in the first-year of matriculation. However, knowing that self-efficacy is not a constant and can fluctuate over time, it is no surprise that we begin to see higher attrition percentages after the first year. The lack of substantial programs that continue to push involvement in student groups and campus activities after the first year may lead students to fall away from the connections and integration we know to be so important from the research of Astin (1984, 1993) and Tinto (1993).

Co-curricular involvement as experiential education

Another benefit of student involvement is its ability to provide experiential education. In this way, we must not see a student's involvement outside the classroom as extra-curricular, but rather co-curricular. This shift in how we view involvement helps reinforce the important role that non-academic activities can have. When done well, co-curricular activities can take what a student is learning in the classroom and give dimension to it by allowing them the ability to see the concepts first hand. This ability to actively work out the lessons they learn in their academic settings make co-curricular activities an extension of the classroom and a chance for students to better understand what is being taught.

Despite the fact that we often measure student learning by looking at specific and measurable outcomes, we know learning is a process, not a series of outcomes (Kolb, 1984). Therefore, we must find ways to extend our ideas of what a classroom looks like. We can no longer assume that students are internalizing and cognizing all the necessary knowledge for success beyond their time in college solely in the classroom, as faculty may be inclined to believe. In turn, student affairs staff members are often so focused on their own areas of concern that they fail to align themselves with their students classroom curriculums. If we are to strive to create atmospheres on college campuses that lead to genuine learning, we must extend learning to all aspects of student life.

What is most encouraging is that the process by which a student learns through experience mirrors closely the process for building self-efficacy. In Experiential Learning Theory, new knowledge and skills are acquired through a process of engaging in a concrete experience, reflecting on that experience, conceptualizing that this new

knowledge means for them, and then testing that knowledge once again, producing a new concrete experience in which the cycle begins again (Kolb, 1984). Similarly, self-efficacy is built from taking previous experiences (or the experience of others), reflecting on whether that experience or outcome was positive or negative, allowing that to influence their opinion of whether or not they will be successful in the future, and in turn, leading to behavior that reflects the level of confidence the individual has in their own future success (Bandura, 1991). Giving students opportunities to take their in-class learning and exercise it in the world around them creates an environment where we will not only see increased learning, but increased confidence in that learning, as well as student self-efficacy.

Experiential learning opportunities, because they have the ability to build student self-efficacy, also become opportunities to increase a student's motivation to persist. If a student takes her learning outside the classroom, has concrete experiences that she can then reflect on, re-conceptualize, and then improve upon through active experimentation, not only does she learn the concept more completely, but will be more likely to internalize that motivation for success and be intrinsically motivated in the future. This motivation will lead to better academic outcomes and an increased likelihood of persistence to graduation.

Currently, co-curricular opportunities that can create these positive outcomes exist at Arizona State University. However, they lack an intentional sense of connectivity between the academic and non-academic entities of the university. The knowledge of engagement opportunities are not well known among professors, and student affairs professionals do not have a firm grasp on what concepts students are learning in order for

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them to more intentionally shape activities. Because of this, I propose a new way of how professionals from all parts of the university can look at our students in order to more directly align us towards the same mission.

Mosaic Model of Co-Curricular Involvement

Imagine, if you will, a single college student. Place them at the center of a circle that represents their existence and worldview. For many professionals in higher education, when you begin to think of all the things that exist within this circle around the student, many things are included. Classes, friends, student group affiliations, physical activity, and family are all elements that are acknowledged as parts of a college student's sphere. Despite knowing this, when working with students, many professionals often only see the student in a singular sphere, with a singular focus. Not so surprisingly, it is the sphere where they engage the student. Professors and academic college leaders see students as only having their classwork in their life, and student affairs professionals see them solely as members of student organizations or intramural teams.

For us as higher education professionals, it's hard for us to always see the whole picture of student life. We spend so much time and effort focused on one aspect of our student's lives, it is hard to believe that they are not equally invested. As we each pull our students to the center of the spheres we see them in, they begin to feel pulled in divergent directions, often at the detriment of other parts of their lives. Whether our pulling them to the center of our focus area is about control or ego, it is not allowing our students to grow the way we all desire them to.

I believe, however, that by redefining the way we all collectively view student life on a college campus, we can begin to see how other parts of our student's lives, their

other spheres of influence, can actually enhance the learning and growth in our sphere. By allowing our students to not exist soleyat the center of our sphere, and allowing them to exist at the center of their own life, we begin to be able to pull back our focus to see the larger picture. Perhaps most importantly, our students already see the multiple influences on their lives, but perceive themselves to be at the center of those influences, not centered in a single one. Instead of seeing a single circle for our students, we begin to see how each circle interacts and overlaps with the others to create a beautiful mosaic. It allows us to see our students how they already see themselves. We can see not only just how complex and interrelated the lives of our students are, but begin to look strategically at how we can work better together to enhance learning and growth not only in our sphere of influence, but on our student's total experience. By working together, across units, we not only create environments where students feel comfortable at the center of their own life, but are encouraged to grow in multiple directions. When we do this, we will also create places where students are self-efficacious and confident in their abilities leading towards higher achievement and likelihood of persistence.

But in order to make this happen, it will take a community effort. The problem is too large and the inputs are too diverse for any one group within an institution to take it on. With dwindling state support of higher education, academic departments are more dependent on grants to support their research than ever before. Offices of student success and student services nation-wide are tasked with all they can handle now and cannot, and should not, refocus solely on second-year persistence. Arizona State University is no different.

At Arizona State University, any issue within the student body, be it behavioral or academic, is that much more evident because of the sheer size of the institution. While it is important to find and develop programs that make small impacts across the university, it is equally important that those programs are developed in such a way as to be scaled larger for more broad use and greater impact. Any design for learning needs to be well-supported across the university as well as able to adjust accordingly within a rapidly growing student body. Because of this I am looking to the work of Bryk, Gomez, & Grunow (2010) and their concept of networked improvement communities.

Networked Improvement Communities

Through this "purposeful collective action" (Bryk, Gomez, & Grunow. 2010, p. 4), we stand not only a great chance of making meaningful changes, but ongoing meaningful changes through continued collaboration. The intention is that each group would be able to "participate according to their interests and expertise while sustaining collective attention on the process toward common goals" (Bryk et al., 2010, p. 5).

Bryk et al. (2010) describe three levels of activity within a networked improvement community. The first of these is A-level, or on-the-ground kinds of work. This practical, hands-on level of work seems to correspond best to the strengths and roles of our teachers and student affairs staff; those already in the classrooms working with our students. The second level that gets laid out is B-level work, which is more concerned with creating efforts to design improvements for the A-level workers. This role within the group would seem to fit the strengths of the administrators, both academic and non-academic in focus. Those people within the institution who have both the ability and the knowledge to do research can create models to be implemented for those in A-level roles.

They are also well situated to take in and analyze the results of the models they create for further improvement. Finally, the C-level activity goes beyond just the institutions of education, and helps to create learning across organizations. This vital role would be filled by community members who have dedicated themselves to the not only the students that they serve, but the community in which they live.

Networked improvement communities work across disciplines and across boundaries to make progress on a larger goal. They consider multiple perspectives and look to continuously improve upon what they are doing through the use of design-based research and implementation (Dolle, Gomez, Russell, & Bryk, 2013). While this concept was largely taken from observation of technological advances in the IT industry, it is particularly well suited to education. By bringing in multiple perspectives from across institutional areas we are better able to understand the other's motivations, as well as formulate mutually beneficial outcomes.

Unlike school boards or parent-teacher organizations, these communities would be carefully thought out and intentionally formed. They would be designed to diagnose the problems facing the students in their areas, then make predictions, implement solutions, and finally assess the success of that solution. As Donovan (2013) states, we must allow for meaningful experimentations within our schools to begin, if we are to ever see real progress.

The first step in creating a Networked Improvement Community will be to create common, measurable, and ambitious goals for the group (Bryk et al, 2010). It is imminently important for these groups to identify not only common goals for progress, but also ones that can actually be tracked, measured, and assessed. Without these added

features, we may never know if we are on track to solving the issues at hand and reaching our common goals, or if we are simply spinning our wheels. The creation of this goal must happen in concert between the three stakeholders in the process. All voices and concerns must be heard for the group to feel as though they are moving towards common goals on even footing and with common purpose.

Next, the newly formed networked improvement community will need to lay out a roadmap, which they will use to identify challenges and move forward though the improvement process (Bryk, et al, 2010). This roadmap must define space for innovation and development along the way that will give space for diagnosis and experimentation. Beyond just a map towards progress, this concept will help keep all of the group's stakeholders both on task and accountable to the end goal of educational improvement.

Finally, the networked improvement community must be predicated on the idea of continuous improvement (Bryk, et al, 2010). As we move through the process of educational improvement, we will inevitably encounter failures, miscalculations, or roadblocks we could not have seen coming. It is important that this knowledge informs us and that we must be comfortable with learning through experimentation and implementation (Bryk et al, 2010; Donovan, 2013). In doing so, we will begin to address two of Donovan's (2013) "Grand Challenges" (p. 319): building spaces that incentivize research on actual problems in a local setting and creating cultures that embrace meaningful experimentation in education.

Dolle, Gomez, Russell, & Bryk (2013) accurately point out that the research and development capacity in education does not currently do an adequate job of addressing the issues that face it. It is underfunded, values theory over practical solutions, and often

operates in a short-term reactive environment that often leads to short-sighted decisions. When institutions operate in a paradigm like this, they are often treating symptoms of a problem instead of the problem itself. They must find ways to create long-range solutions for our problems and then engage intentionally in them in order to better serve students for years to come.

In many ways, the New American University does just this very thing. It lays out bold goals and expectations, and sets the stage for its own success, by being inclusive of all parts of the university community. In doing so, the New American University model has become something that is not only well known among those on campus, but is foundational in all the decisions that are made by campus leaders. In this same way, the institution can find solutions to the issue of second year persistence through building a networked improvement community within the framework of the New American University.

Dolle et al (2013) reminds us that in the creation of this networked improvement community, an institution must be both inclusive and practical:

> [T]he focus is on better understanding how the system operates and on identifying and testing change ideas for improving the system. Because NICs [networked improvement communities] are an effort to redesign education systems from the ground up, research methods are eclectic and, most importantly, pragmatic: how can we learn fast with empirical warrant and minimal "footprint"(p. 446).

Through the formation of a networked improvement community, the institution will define a common goal and challenge how to engage that goal with the work around it. In doings so Arizona State University will not only find innovative solutions, but solutions rooted in practical application.

Because it aims to change the outcome of a system, it must change how the system itself operates. Dr. Batalden of the Dartmouth School of Medicine has said that "[e]very system is perfectly designed to get the results it gets" (quoted from Dolle, et al, 2013). Because networked improvement communities are, by their nature, a system-changing concept, the biggest struggle may be in convincing others to join the community at all.

Intended Outcomes

This design for action first looks to improve the student's likelihood of persistence and the intended outcomes of this networked improvement community are as simple as they are ambitious: To increase the four and six-year graduation rates at Arizona State University. In order to accomplish this, the networked improvement community will focus on increasing student intrinsic and higher-order extrinsic motivation by increasing student self-efficacy, affirming their perceived locus of control, and creating spaces for students to have valuable hands on experiential learning opportunities with the concepts they are being taught in the classroom.

These identified outcomes will be developed through the networked improvement community's focus on two key initiatives: Fusing intellectual disciplines through a shared understanding of academic programs and creating use-inspired research opportunities through co-curricular involvement. Not ironically, both of these initiatives directly correlate to previously stated university design imperatives of the New American University.

Success in this endeavor will require the input and participation of several key partners within the university structure. These partners include: academic departments,

their student programming coordinators, the professors within that department, and the student services departments including student activities staff, career advisors, and academic advisors. Working together, these groups of professionals can set the table for students at Arizona State University to not only have increased real-world experience within a chosen field, but create a campus that supports the building of overall student self-efficacy in an effort to produce well-rounded and practically well-prepared adults for the Arizona workforce.

Fuse Intellectual Disciplines Through a Shared Understanding of Academic Programs

The work of the networked improvement community will begin by giving those outside of the academic realm a better understanding of both the academic programs offered, as well as the requirements and intended learning outcomes of each program from the academic departments themselves. The intention of this broad sharing is two-fold; first, that programs can identify common curriculums or intended outcomes that may allow for increased learning opportunities for students who are struggling with specific topics, and second, that a set of common terms and language can be determined to help students see where connections exist across academic boundaries.

This type of fusing of intellectual disciplines can happen in a variety of ways. One example would be creating a financial or accountant position within a university's programming board. The advisor of the programming board, with their increased understanding of the intended outcomes and techniques being taught to students, can help create a position that enhances the classroom learning in order to develop an active laboratory for student learning.

When academic and non-academic departments locate and identify common learning outcomes, they open up opportunities for their students. Students may struggle with the approach to a concept in the classroom, but be able to better understand it when it is taught from a different perspective. By increasing pathways to new learning, the institution is increasing our student's likelihood of creating stronger academic self-efficacy.

This laboratory of learning not only will allow for students to build on the skills they learned in the classroom, but will expose them to the chaos that cannot always be taught in a classroom. No matter how hard a professor may try, it is difficult to recreate the pressures and unexpected issues that arise in real life workplaces. Personalities, supervisors, and other factors affect how a person is able to attack their work in a given scenario. By giving students the opportunity to engage in this process while still in the controlled environment of the university, you give them more supports and chances to navigate how they will engage with the work when they graduate. These skills not only help make them more well-rounded professionals, but allow them to speak more articulately about both their experience and how they handle themselves in tough situations.

Create Use-Inspired Research Opportunities Through Co-Curricular Involvement

A natural bi-product of the networked improvement community's broader understanding of the intended outcomes is an ability to better connect them to opportunities within the university to further enhance their learning. By connecting them to these opportunities, we will not only increase their connection to the university and the

community within the university, but will create situations in which enactive mastery experiences can be created.

By connecting students with like interests, we connect students to one another. It is through these connections that students are able to not only learn from those who have come before them, but mentor those who come behind them. Additionally, as the institution gives students opportunities to have hands-on exposure to the things they are interested in, it creates interactive mastery experiences where students will be able to grow their self-efficacy, and increase their chance of persisting to graduation.

An example of this may be creating a marketing committee within a pre-established student government. Professionals who advise and work with the student government marketing committee can increase the student's knowledge of, and language used by, students who may be in marketing majors, opportunities for expanded learning can be created. These advisors can work with students who are learning marketing techniques and strategies in the classroom, and give them space to try them out in the real world. They know what the intended outcomes and curriculum are, and therefore can ask more pointed questions, prompting the students to think more critically about their work. When done well, these opportunities create space for learning to extend far outside the classroom. Perhaps more impactful than the learning that will take place, the students will leave their time in student government with not only an ability to speak to a skill set they have actively exercised, but with a portfolio of successful work they have completed when they enter the job market.

We are all better together. If we truly hope to see meaningful educational change, we, the academic and student services professionals, must work together. We must blur

the lines between academic and non-academic departments to be successful. When these units begin working in tandem, playing off each other's distinct skill sets and strengths, we will see measurable growth in our student outcomes. Using the concept of Networked Improvement Communities (Bryk, Gomez, & Grunow, 2010), we can begin to find ways for these three groups to work towards real educational change.

Evaluation

The need for evaluating this design for learning, both in its implementation as well as its overall design, is critical for the evolution and eventual success of the program. The networked improvement community will need hard and true data to show its value to the students it intends to serve. Without this information, it will be difficult to advocate for a wider implementation of the design. Only through thorough and continued evaluation will we be able to identify where the design is working, and where it may need to be altered. In the end, it is our hope that we will be able to flush out any and all issues that may impede on the process of learning for the students it is designed to serve.

The findings will be analyzed both independently as well as internally to identify trends and patterns, both positive and negative. The information will work to inform next steps of the design, and possible a re-evaluation of parts of the design to make sure that it is as effective as possible. The information will also be used to track progress of the students and academic units who implement the design. The hope is that we see increases in student self-efficacy leading to increased motivation to persist. Additionally, it would be optimal to measure increases in student learning outcomes that may be associated with the increased co-curricular involvement and experiential learning opportunities.

Stakeholders

There are several sets of stakeholders in this design for learning. While they will be evaluated separately for their diverse intended outcomes, they will also be evaluated as a whole, in how those intended outcomes work together.

The first set of stakeholders in this design are the students themselves. In fact, we'd be remiss if we did not acknowledge that they are perhaps the most important stakeholders. The design is, after all, intending to create greater outcomes for them first and foremost. Because of this, evaluating student success in this new design must be paramount. Evaluating the success of this design would happen by identifying if students were not only persisting from their second-year to their third, but ultimately persisting to graduation. While helping students successfully complete their course of study is important, we should also be focused on how the time they spend at Arizona State University prepares them for success after graduation.

The second set of stakeholders in the proposed design are the academic colleges and professors. Without their full buy-in to the overall vision of this design for learning, we will not see the success we intend. When we evaluate the overall success of the program, we must not forget to include evaluations and assessments of the experiences and outcomes seen by the academic side of the university. Are students more engaged in the classroom? Are those students who participate in the co-curricular learning opportunities showing greater progress and learning outcomes? Beyond just the results, what are the experiences of academic professionals in working with the student affairs professionals? Is the communication between the two sides effective? Do the academicians feel heard? Respected? Does this new system create an added burden to the

already heavy load professor's carry? In many ways, the academic community within the university is the lynchpin to the success in this design, as they ensure that the program is complimentary and a welcome addition to their curriculum.

The third group of stakeholders are the support and student affairs staff that would be integrated into this new programmatic outlook. In much the same way that we would evaluate and assess the experiences of the academic participants, we must also do the same for those from the student affairs side. For this design to be successful, there must be buy-in from all parties involved in the Networked Improvement Community, and we must ensure that as we rollout and begin to execute the design, we are ensuring that all concerns are being addressed.

Context

The contexts and environments of this design are both key to the success. The inspiration behind this design is that by taking into consideration the individual and idiosyncratic environment, the design will be adaptable enough to be successful. The thought behind using a Networked Improvement Community model is to ensure that the program is context-specific, and includes those individuals who are most central to the success of the model.

With this understanding, the design and evaluation must be context-specific. Taking into consideration not only the immediate outcomes, but also the progress made towards desired outcomes, will allow us to fully understand the impact being made by the design for learning.

Logic Model

   The logic model below gives an overview of the stakeholders and how they will work together towards the success of the design for learning. This model can be used as a way to begin looking at points of evaluation that will need to occur both in the short-term as well as the long-term.

Figure 7

Evaluation Logic Model

Program: Co-Curricular Programming Networked Improvement Community Logic Model
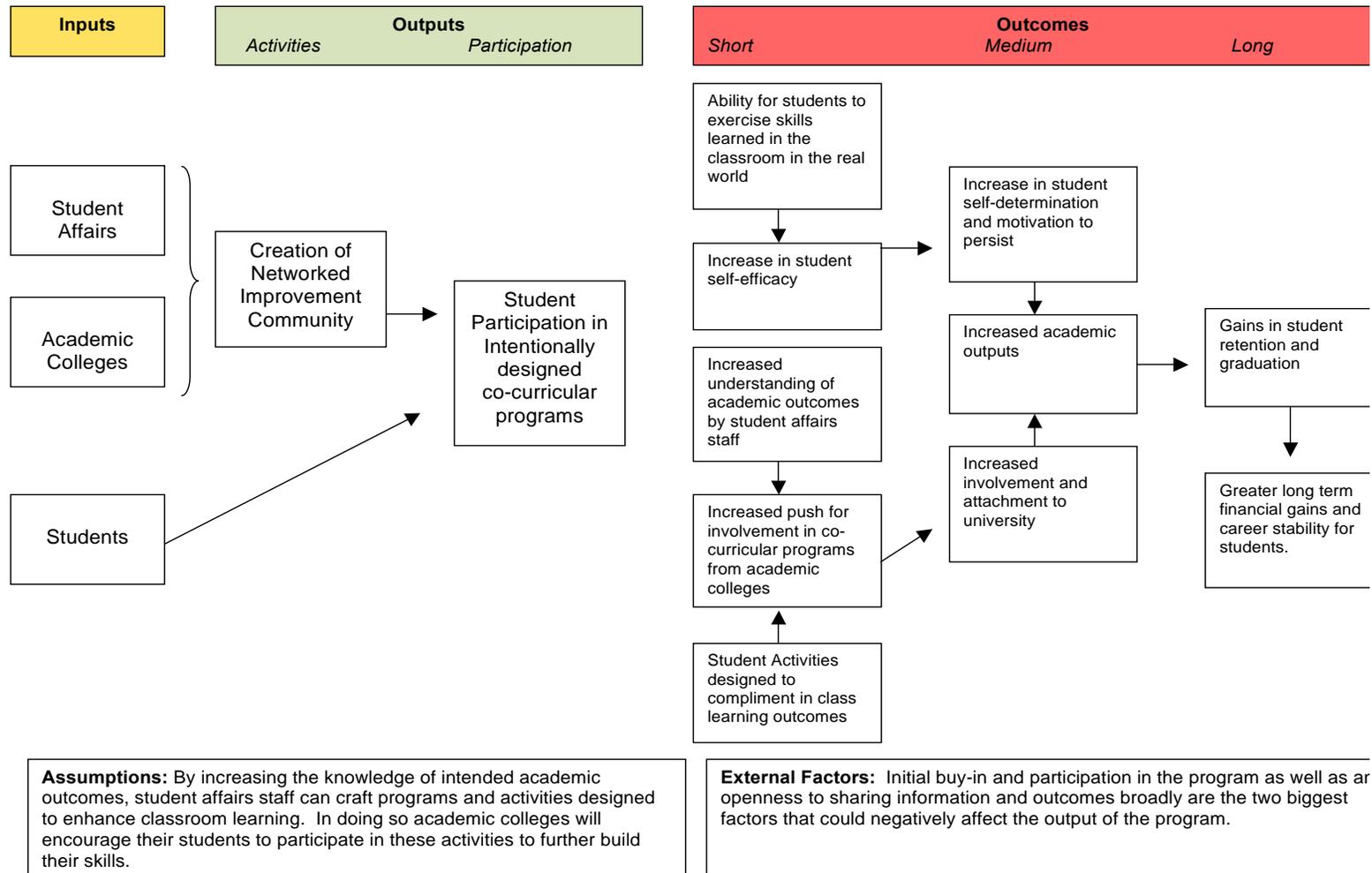
Evaluation Design

The specific information I am looking to get from this evaluation plan can be seen in two questions. The first: Is this design is creating an increase in learning and success among students in the community? The second: is this design increasing the involvement and collaboration between the academic and student affairs divisions within the university?

The evaluation findings will be used in a series of different ways. The first is to assess the educational outcomes of the students involved in the design. The answers from that evaluation process will dictate the continued use of the program or the re-thinking of the design. For the evaluation to be of value to all parties involved, it must be able to identify what aspects of the design are working, and which are failing.

All the findings from the various evaluations will be used to make improvements as the design continues to evolve. These adjustments to the design are only possible if the information we receive as a result of the evaluations is seen as credible by those who hold stake in the design. This will mean that we must be intentional in our evaluation practices, and consistent in their implementation.

The evaluation design will be both a mixed methods design as well as an integration of a 360-evaluation model. The quantitative methods will be used to track the progress of the students involved in the design setting. This will allow us to have a baseline for their growth towards educational outcomes.

The qualitative methods will largely focus on the interactions between all the parties involved in the networked improvement community. Evaluations will include the introduction and implementation, which will allow us to see if this design allows for

more collaborative pedagogies to take hold. These evaluations will be held on a regular basis to identify trends and make adjustments in the design as it continues to roll out.

The final method will be a 360-evaluation that allows for all the parties involved in the networked improvement community to reflect and provide feedback for their internal interactions. Being that the heart of the success of this design is in the effective collaboration of the academy and student affairs, it is paramount that we work to maintain the inter-workings of these networks. This 360 Evaluation will be rooted in David Rock's SCARF Model for collaborating and influencing others (2008). This model ensures that the all individuals involved in the evaluation process find that their **S**tatus is accounted for, the **C**ertainty of their continued involvement is addressed, their **A**utonomy remains, they are made to feel **R**elated to the situation being evaluated, and that the process is **F**air. As we create interconnected communities, Rock's model helps us determine how we can best account for our differences while working together for a common goal.

Evaluation Data Collection

For this evaluation I plan to use a mixed methods approach in order to best assess the true successes and shortcomings of the design for learning. I am choosing to do this because in order to get the full picture. Neither quantitative nor qualitative alone will help show the whole story. As is made evident by my research questions below, the actual statistics will only show us part of the picture of our progress, and not explain why or how we are potentially making this progress.

Using Merten's (2009) outline for concurrent design, I will gather the qualitative and quantitative data in close temporal proximity to one another. This is important,

because it will allow us to better track quantitative advances and how they relate to our qualitative data. An example of this would be seeing an increase in student self-efficacy and classroom learning outcomes, while at the same time, we see people in all sections of the networked improvement community feeling valued and connected to the process, or vice-versa.

The quantitative data will be collected on the student's progress through a pre / post-test model using the College Student Self Efficacy Inventory. This will help to identify if, over time, there are increases in the student's self-efficacy that may be correlated to their participation in the intentionally-designed co-curricular programs that are the core of the design for learning. Data can also be derived from looking at student learning outcomes and grades over time. Having professors identify whether or not there are greater learning outcomes from their classes after the integration proposed by the design will help to indicate its success.

The qualitative data will be collected using written surveys, given on a tri-annual basis, and a formal interview given at the end of each academic year. The 360-evaluations will take place at the end of each academic unit/semester. The nature and questionnaires used for these evaluations will be reviewed annually to ensure that they are addressing the necessary questions and outcomes.

All parties involved will be evaluated in some form or another, as the success of networked improvement communities is based, in large part, on the inclusion of all party's inputs. The results of the evaluations will be made available to all involved in the network, so that they can be addressed collectively. While all information will be made

available, all results and answers will be kept confidential, which will encourage people to speak openly and freely.

Communication and Reporting

Evaluation will be integrated into as many points of the design for learning as is feasible. The hope is that we develop a cyclical evaluation model (Mertens, 2009) that is not seen as a secondary task, but rather an instrumental and meaningful tool for success. It will become second nature and open the door for future evaluation methods not accounted for in this plan. Mertens (2009) shows us the importance of cyclical evaluation models, particularly in relation to transformative research, because it best accounts for the participatory nature of the stakeholders. Being that these stakeholders are an integral part of the networked improvement community model, it is of paramount importance that we introduce an evaluation format that gives voice to their concerns and allows them to be a driving force in change and improvement.

The data mined from the evaluation processes will be made available to all involved, so that they may reflect on the data more personally and determine what the information may mean for their role in the networked improvement community. As a group, evaluations will be analyzed and recommendations proposed. However, individuals who see possibilities for growth would also be empowered to act on those.

Open communication among all involved parties within a networked improvement community is crucial to its success. Therefore, all members of the networked improvement community would be involved in communication. Most often this will occur digitally, through email or on message boards. Regular meetings of the principle parties will occur where a more open forum on ideas may be had.

Chapter 5

Generative Impacts

The impacts of a strong and well-executed co-curricular slate of programs would happen on a series of levels. To really understand the extent to which these programs could produce generative and long-lasting impacts, we must analyze various components. What impacts would these types of programmatic opportunities have on students? How would these programs influence their ability to not only find work after graduation, but find a career? Then, if students are successfully finding careers after graduation, what effect does that have on the community immediately around them? Finally, as these communities begin to change, how to will this effect the larger State of Arizona?

In 2008, 41,552 of the 52,034 students attending Arizona State were from the state of Arizona (ASU Quick facts). Of those, 37,554 were from Maricopa County. If these percentages have remained the same, that means roughly 65,000 of the 83,000 students currently enrolled are from the greater Phoenix area, which shows just how impactful the university can be in the region. With the sheer number of students who attend Arizona State, any increase in earning potential through degree-attainment would have a substantial impact on the area.

For us to truly understand the impact that increasing persistence towards graduation could have, it is important that we look at the impacts on several levels. Each of these influence the other, and when put together, show the domino like effect we would see through successful increases to graduation rates.

Individual Impacts

For individuals, the combination of a limited earning potential and student debt may prove to be financially crippling. The fall of 2014 saw Arizona State University bring in nearly 11,000 freshmen, and assuming that the most recent six-year graduation rate from 2012 has remained steady, that means that that approximately 4,700 students who began at the institution will not graduate within six-years. What is worse is that most will leave with debt to show for it. The most recent data from NCHEMS (2014) shows that the average student is taking on $4,608.00 annually to pay for their education. When we look at those two figures together, they equate to roughly $21.7 Million dollars of debt annually, at the very least, being taken on by students who still may not have a degree. If we do this math equation year after year, we begin to see a trend of debt that may hinder young people's start to adulthood.

Institutional Impacts

As states across the country continue to cut their financial support of higher education, colleges and universities are becoming increasingly more dependent on tuition to make their budgets balance. Certainly, research grants and other academic investments are part of the financial landscape for schools, but the dependence on tuition for the day-to-day operations of the school makes solving this issue of attrition so much more important.

Beyond maintaining a flow of resources by continuing to bring in tuition dollars, universities are also increasingly dependent on donations and contributions by alumni (Cunningham & Cochi-Ficano, 2002). Students whose experience is positive while at the university are much more likely to be active donors and contributors to alumni

associations, as well as other programs on campus (Cunningham & Cochi-Ficano, 2002). It would also follow that students who do not graduate from the university are both rarely approached about giving, as well as significantly less likely to have a desire to give back financially. Because of this, persistence of students has a direct impact on the financial future of an institution.

Community Impacts

This trend of lower earning potential and higher debt will begin to have a ripple effect in the community. Less income and higher levels of debt naturally lead to lower buying power for individuals. Since most of these students are from within Arizona to begin with, the effect of this lower buying power and lower potential for economic investment will first be felt within the borders of the state. This is particularly alarming for some communities over others. In a series of publications, the state of several prominent communities of color in Arizona are laid out. These documents, The State of Latino Arizona, The State of Black Arizona, and The State of Indian Country Arizona, all separately discuss the importance of education for their communities.

With only about 4% of the population of Arizona being of Black or African-American decent, their struggles are often overlooked in educational policy debates. In fact, as Scott (State of Black In Arizona, 2011) states, while there are a few schools with majority Black populations, there are no geographic areas that have a majority Black population within the state of Arizona. In The State of Black Arizona, Vol. 3 (2011), a great emphasis is placed not only education and educational achievement, but STEM related education. The programs and interventions discussed focus not only on college preparation, but the skills needed to ensure that students persist to graduation.

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In The State of Latino Arizona, the emphasis on educational outcomes is equally as evident. Unlike Black communities in Arizona, Latino communities make up a large part of the Arizona population and accounted for 43% of all births in the state in 2003 (State of Latino Arizona, 2009). With a strong and growing population within the state Latina/os are looking to create a better future through education, and particularly higher education. In the section of The State or Latino in Arizona titled 'Each of Us Has a Role' Paul Luna (State of Latino Arizona, 2009) writes about the need for his community to embrace higher education:

> Postsecondary education is an option for all students. Early in their academic careers, we must talk to our children about their aspirations, helping them plot their academic coursework to ensure they have the most options and opportunities to choose from at the end of their secondary education career. Each of us has a role in building Latino youths' belief that postsecondary education is a viable option and to guide them toward the variety of postsecondary pathways that exist in our state. In addition, we must remove the financial barriers that often deter families from encouraging students to pursue postsecondary education. One of the greatest gifts we can give our Latino youth is to create a culture within our homes and across the state that values lifelong learning and fosters educational attainment from the earliest years on. Parents play a critical role in encouraging their children to excel academically. (p.41)

Finally, in The State of Indian Country in Arizona, higher education success takes on perhaps its most ambitious purpose, Nation Building (State of Indian Country in Arizona, 2013). Within the Native American communities, of which there are many in Arizona, those with college degrees are seen as the leaders who can bridge two worlds together. If they choose to return to the reservation after they finish their degree, they bring with them an ability to both preserve their heritage as well as build strong communities that can integrate with the modern world around them. In no community in Arizona is the impact of its members being educated being felt more than in the Native communities.

Collectively and uniquely, these communities all recognize the impact of educating their children. All victims of the achievement gap, they are distinctly aware of how important it is that students not only have access to higher education, but that they are successful when they are there and that they complete their degree. The ripple effects of their children becoming more educated and having increasing access to social and economic capital will not only help to close the achievement gap, but also the gaps in class and social status that separate so many groups.

We must also remember that when studying communities of color, we are much more likely to be dealing with first-generation college students (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Students who are the first in their families to pursue a college degree often have their own sets of hurdles and difficulties they need to navigate (Terenzini, Springer, Yaegger, Pascarella, & Nora, 1996). Because of these added pressures and transitions, first-generation college students are already at a higher risk of attrition than their peers.

While the road may be more difficult for some, the end result is often much more impactful. Students who return to their communities with a college degree are more likely to foster a belief in others that they, too, can achieve success academically. The effects can be much farther reaching than a single degree. When these students come back to their communities, they are better able to provide financially and are more likely to invest in their community. Through purchasing goods and services, real estate, and other products, they give back to their communities in profound ways. This investment raises the likelihood that other students will be able to afford to go to college themselves, and when they return they will only add to the upward trajectory. Eventually, the tide in a

community will have turned such that well-paying jobs are not something people need to leave the community to find, but rather exist for them near their homes. For those in communities of lower socioeconomic levels, helping to ensure the success of their college-going students can have strong and long lasting effects. These are not simply isolated incidents of education, but the beginning of a wave of possibility for not only this generation, but for generations to come.

Nowhere is this more true than for Native American students living on reservations which occupy much of the state of Arizona. Depending on where they grow up, Native American students in Arizona may be educated by tribal, public, federal, parochial, or charter schools (State of Indian Country in Arizona, 2013). Naturally, the closer the tribal lands may be to metropolitan areas, the greater access to education students have. Native American leaders are increasingly acknowledging the needs of their people to be "thriving in two worlds" (State of Indian Country in Arizona, 2013, p. 50). Because of this, Native American communities in Arizona have seen an increase in students returning home after graduating to help teach and educate those on the reservation (State of Indian Country in Arizona, 2013). Graduates who can bring together knowledge from their own Native traditions and combine them with modern technologies and systems are perhaps the most cogent way to bring together these two worlds. Beyond bringing back graduates as teachers, tribal elders know that these students will also bring back other knowledge bases to help modernize and improve life on the reservations. While this trend is certainly a positive one, as of the 2010 census, only 3.5% of Native Americans living on Native lands had completed a bachelor's degree.

Conclusion

In the end, the success of, or failure of, this design for learning will not be for those involved in creating or executing it, but rather for the students for which it is designed to benefit. As we endeavor to increase the successes of our students, it is important that we recognize that in order to be successful, we must look beyond just ourselves. The basic premise behind the success of Networked Improvement Communities is the idea that we are better when working together than we are separately. We are greater than the sum of our parts.

Through increasing the collaboration between academic departments and student affairs professionals on campuses nationwide, and particularly at Arizona State University, we open the door to a shared vision of student outcomes. When this begins to happen, we are able to design programs that enhance student learning, increase student self-efficacy, and ultimately increase student's academic motivation to persist. This design for learning not only allows for greater outcomes for students and the institution, but also develops students who are ready to be successful when they leave the institution and enter the working world.

References

A new American university: 2015 and beyond [PowerPoint Slides]. (2015). Retrieved
      from http://anewamericanuniversity.asu.edu

Arizona State University (ASU). (n.d.). *Quick facts*. Retrieved from
      http://uoia.asu.edu/quick-facts

Astin, A.W. (1977). *Four critical years. Effects of college on beliefs, attitudes, and*
      knowledge. San Francisco, CA: Jossey-Bass.

Astin, A.W. (1984). Student involvement: A developmental theory for higher education.
      Journal of College Student Development, 40, 518-529.

Astin, A.W. (1993). *What matters in college: Four critical years revisited.* San
      Francisco, CA: Jossey-Bass.

Bandura, A. (1990). Some reflections on reflections. *Psychological Inquiry, 1,* 101-105.

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior*
      and Human Decision Processes, 50, 248-287.

Barefoot, B. (2000). The first-year experience: Are we making it any better? *About*
      Campus. 4(6): 12-18.

Barry, C. L., & Finney, S. J. (2009). Can we feel confident in how we measure college
       confidence? A psychometric investigation of the college self-efficacy
      inventory. *Measurement and Evaluation in Counseling and Development*, *42*(3),
       197-222.

Bean, J.P. (1981, April). The synthesis of a theoretical model of student attrition. Paper
      presented at the Annual Meeting of the American Educational Research
      Association*,* Los Angeles, CA.

Bean, J.P. (1988). Rethinking the causes and cures of student attrition by Vincent Tinto.
The Journal of Higher Education, 59, 708-711.

Bibbings, L.S. (2006). Widening participation and higher education. *Journal of Law and Society, 33,* 74-91.

Bidwell, A. (2013). College enrollment falls for second year in a row. *US News and World Report*. Retrieved from http://www.usnews.com/news/articles/2013/12/12/college-enrollment-falls-for-second-year-in-a-row

Bourdieu, P., & Passeron, J. (1970). *Reproduction in education, society, and culture* (L. Wacquant Trans.). (2nd ed.). Thousand Oaks, CA: Sage.

Bryk, A. S., Gomez, L. M., & Grunow, A. (2010). *Getting ideas into action: Building networked improvement communities in education.* Stanford, CA: Carnegie Foundation for the Advancement of Teaching. Retrieved from http://www.carnegiefoundation.org/spotlight/webinar-bryk-gomez-building-networked-improvement-communities-in-education

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*(Suppl. Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure), S95-S120.

College Measures. (2015). 4-year college data tool [dataset]. Retrieved from http://collegemeasures.org/4-year_colleges/home/

Cunado, J., & Perez de Gracia, F. (2012). Does education affect happiness? Evidence from Spain. *Social Indicators Research, 108*(1), 185-196.

Cunningham, B.M., & Cochi-Ficano, C.K. (2002). The determinants of donative revenue

flows from alumni of higher education. An empirical inquiry. *The Journal of*

Human Resources, 37, 540-569.

Dewey, J. (1938). *Experience and Education*. New York, NY: Macmillan.

Dika, S. L., & Singh, K. (2002). Applications of social capital in educational literature: A

critical synthesis. *Review of Educational Research, 72*(1), 31-60.

Dolle, J.R., Gomez, L.M., Russell, J.L., & Bryk, A.S. (2013). More than a network:

Building professional communities for educational improvement. *National Society*

for the Study of Education, 112, 443-463.

Donovan, M. S. (2013). Generating improvement through research and development in

education systems. *Science, 340*(6130): 317-319.

Dytham, C. (2011). *Choosing and using statistics: A biologist's guide.* Hoboken, NJ:

Wiley.

Ferla, J., Valcke, M., & Cai, Y. (2009). Academic self-efficacy and academic self-

concept: Reconsidering structural relationships. *Learning and Individual*

Differences, 19, 499-505.

Freire, P. (1972). *Pedagogy of the oppressed*. New York, NY: Herder and Herder.

Gagné, M., Deci, E.L.. (2005). Self-determination and work motivation. *Journal of*

Motivational Behavior, 26(4): 331-362

Gardner, S. K., & Holley, K. A. (2011). "Those invisible barriers are real": The

progression of first-generation students through doctoral education. *Equity &*

Excellence in Education, 44(1), 77-92.

Gore Jr., P.A. (2006). Academic self-efficacy as a predictor of college outcomes: Two incremental validity studies. *Journal of Career Assessment, 14,* 92-115.

Hartog, J, and Oosterbeek, H. Health, wealth and happiness: Why pursue a higher education? *Economics of Education Review, 17*(3): 245-256.

Haveman, R., & Smeeding, T. (2006). The role of higher education in social mobility. *The Future of Children, 16,* 125-150.

Herzog, S. (2005). Measuring determinants of student return vs. dropout/stopout vs. transfer: A first-to-second year analysis of new freshman. *Research in Higher Education, 46*(8)*:* 883-928

Hoffman, D.L., & Novak, T.P. (1998). Bridging the digital divide: The impact of race on computer access and internet use (Working paper). Retrieved from http://files.eric.ed.gov/fulltext/ED421563.pdf.

Jackson, J.W. (2002). Enhancing self-efficacy and learning performance. *The Journal of Experimental Education, 70*(3). 243-254.

Kahn, J.H., & Nauta, M.N. (2001). Social-cognitive predictors of first-year college persistence: The importance of proximal assessment. *Research in Higher Education, 42*(6): 633-652.

Kolb, D.A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Kolb, D. A., Boyatzis, R. E., & Mainemelis, C. (2001). Experiential learning theory: Previous research and new directions. *Perspectives on thinking, learning, and cognitive styles*, *1*: 227-247.

Kolb, A.Y., & Kolb, D.A. (2008). Experiential learning theory: A dynamic, holistic

approach to management learning, education and development. In Armstrong, S.J., & Fukami, C. (Eds), *Handbook of management learning, education and development.* London, United Kingdom: Sage.

Lareau, A. (2011). *Unequal childhoods: Class, race, and family life*. Berkley: Univ of California Press.

Lauerman, J. (2014). Enrollment in U.S. colleges declines for a second year. *Bloomburg Business*. Retrieved from http://www.bloomberg.com/news/articles/2014-09-24/enrollment-in-u-s-colleges-declines-for-a-second-year

Madland, D. (2011). Growth and the middle-class. *Democracy: A Journal of Ideas*. Retrieved from http://www.democracyjournal.org/20/growth-and-the-middle-class.php

Mertens, D.M. (2009). *Transformative research and evaluation*. New York, NY: Guilford.

Multon, K.D., Brown, S.D., and Lent, R.W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38*: 30-38.

National Center for Higher Education Management Systems. (2014). College Participation Rates: College-Going Rates of High School Graduates - Directly from High School [Data files]. Retrieved from http://www.higheredinfo.org

Newton, K. (1997). Social capital and democracy. *American Behavioral Scientist, 40*, 575-586.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66,* 543-578.

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Rock, D. (2008). SCARF: A brain-based model for collaborating with and influencing others. *NeuroLeadership Journal*, *1*(1), 44-52.

Ryan, R.M., & Deci, E.L. (2000). Self determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.

Schrader, P.G., & Brown, S.W. (2008). Evaluating the first year experience: Students' knowledge, attitudes, and behaviors. *Journal of Advanced Academics, 19,* 310-343.

Shadish, W.R., Cook, T.D., Campbell, D.T. (2001). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.

Solberg, V. S., O'Brien, K., Villareal, P., Kennel, R., and Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the college self-efficacy instrument. *Hispanic Journal of Behavioral Sciences, 15*(1): 80–95.

Stajkovic, A.D. & Luthans, F. (1998). Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioral approaches. *Organizational Dynamics, 26*(4), 62-74.

Tankersley, J. (2014). The GOP is debating whether Reaganomics needs an update. *The Washington Post*. Retrieved from http://www.washingtonpost.com/business/economy/the-gop-is-debating-whether-reaganomics-needs-an-update/2015/02/25/326ab7d8-b5fa-11e4-aa05-1ce812b3fdd2_story.html

Terenzini, P.T., Springer, L.S., Yaeger, P.M., Pascarella, E.T., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 37,* 1-22.

Tinto, V. (1993). *Leaving college*. Chicago, IL: The University of Chicago Press.

van Dijk, J. (2006). Digital divide research, achievements, and shortcomings. *Poetics, 34,* 221-235.

van Dijk, J., & Hacker, K. (2003). The digital divide as a complex and dynamic phenomenon. *The Information Society, 19*, 315-326

van Dinther, M., Dochy, F., & Segers, M. (2011). Factors affecting students' self-efficacy in higher education. *Education Research Review, 6,* 95-108.

Webster, A.L. (2014). An examination of the growing level of income inequality. *American Journal of Economics and Business Administration, 6,* 11-18.

Willcoxson, L., Cotter, J., & Joy, S. (2011). Beyond the first-year experience: The impact on attrition of student experiences throughout undergraduate degree studies in six diverse universities. *Studies in Higher Education, 36*(3): 331-352.

Zimmerman, B.J., Bandura, A., & Martinez-Pons, M. (1992). Self motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal. 29*(3): 663-676.

Appendix A: Participant Email

Subject: Participation In a Research Study
Good Afternoon,

My name is Benjamin Davis and in addition to my role here at Arizona State University I am working on Doctoral degree from Duquesne University. Specifically I am looking at factors that may lead to student's departure from the institution after their second-year of matriculation. Because of your current status as a second-year, sophomore level student your input can be very valuable to my research.

Because of this I am asking that you take part in my research study. Your involvement will at the least consist of you taking a brief, 4-8 minute online survey at the beginning and end of the semester, and at most you will be asked to take the same 4-8 minute survey at the beginning of each month during the semester (January, February, March, and April). For both situations I will also ask whether or not you intend to return in the Fall semester to start your third-year here at Arizona State.

For your participation in this research study you will be eligible to win one of five (5) $25.00 Amazon Gift Cards as athank you!

During the process of data collection your confidentiality is of the utmost importance to me. Any personally identifiable information that is provided will only be used to connect your survey results to one another, and to confirm if you are enrolled for the Fall Semester 2015. After this, all records will be deleted. Your name will never appear on any survey or research instruments. No identity will be made in the data analysis. All written materials and consent forms will be stored in a locked file in the researcher's home. Your response(s) will only appear in statistical data summaries. All materials will be destroyed at the completion of the research.

There are no risks to participants greater than those of everyday life. While there are no personal benefits, your participation will benefit the profession and future Sun Devils by advancing the knowledge of the effect of self-efficacy on student persistence at Arizona State. You are under no obligation to participate in this study. You are free to withdraw your consent to participate at any time. You will not be required to do anything in order to withdraw from the study other than notifying me of your decision.

I thank you in advance for your participation in this study, and if you are interested will share my results with you when I have completed my research. To participate, please click on the link below to be taken to the survey.
LINK HERE
Ben Davis
Assistant Director – Memorial Union
Memorial Union 331
P: 480.965.9364
Ben.Davis.1@asu.edu

Duquesne University

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

TITLE: Effects of Student Academic Self-Efficacy on Persistence into the Third year of College

INVESTIGATOR: Benjamin Davis, M.A.
Assistant Director, Memorial Union
Memorial Union, 331
480-965-9364

ADVISOR: (if applicable:) Dr. James Schreiber
School of Education, Dept. of Educational Foundations and Leadership
412-396-1081

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the doctoral degree in Education Leadership at Duquesne University.

PURPOSE: You are being asked to participate in a research project that seeks to investigate the effects of college student's academic self-efficacy in their decision to persist into the third-year of enrollment. In order to participate you need only to fill out a brief survey online at the beginning and end of the semester, and indicate if you are registered for classes in the Fall of 2015. This survey should only take between 4-8 minutes to complete. In addition, you may be asked to allow me to contact you to fill out the survey at the beginning of each month throughout the semester.

These are the only requests that will be made of you.

RISKS AND BENEFITS: There are no risks to participants greater than those of everyday life. While there are no personal

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benefits, your participation will benefit the profession and future Sun Devils by advancing the knowledge of the effect of self-efficacy on student persistence at Arizona State.

COMPENSATION: **5 participants in the study will be selected at random to receive a $25 gift certificate to Amazon.**

CONFIDENTIALITY: Your name will never appear on any survey or research instruments. No identity will be made in the data analysis. All written materials and consent forms will be stored in a locked file in the researcher's home. Your response(s) will only appear in statistical data summaries. All materials will be destroyed at the completion of the research.

RIGHT TO WITHDRAW: You are under no obligation to participate in this study. You are free to withdraw your consent to participate at any time. You will not be required to do anything in order to withdraw from the study other than notifying the researcher of your decision.

SUMMARY OF RESULTS: A summary of the results of this research will be supplied to you, at no cost, upon request.

VOLUNTARY CONSENT: I have read the above statements and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent at any time, for any reason. On these terms, I certify that I am willing to participate in this research project.

I understand that should I have any further questions about my participation in this study, I may call Benjamin Davis, Principal Investigator, 480-965-9364, Dr. James Schreiber, Advisor, 412-396-1081, and Dr. Linda Goodfellow, Chair of the Duquesne University Institutional Review Board 412-396-6326).

_____   _____
Participant's Signature   Date

_____   _____
Researcher's Signature   Date

The following 20 items concern your confidence in various aspects of college. Using the scales below, please indicate how confident you are as a student that you could successfully complete the following tasks. If you are extremely confident, mark a 10. If you are not at all confident, mark a 1. If you are more or less confident, find the number between 10 and 1 that best describes you. Item responses are aggregated across all student respondents in order to better understand how confident the "average" student feels. Levels of confidence vary from person to person, and **there are no right or wrong answers; just answer honestly.**

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Not at all Confident   **Extremely Confident**

1. **Make new friends at college.**
2. **Divide chores with others you live with.**
3. **Talk to university staff**
4. **Manage time effectively.**
5. **Ask a question in class.**
6. **Participate in class discussions.**
7. **Get a date when you want one.**
8. **Research a term paper.**
9. **Do well on your exams.**
10. **Join a student organization.**
11. **Talk to your professors.**
12. **Join an intermural sports team**
13. **Ask a professor a question.**
14. **Take good class notes.**
15. **Get along with others you live with.**
16. **Divide space in your residence.**
17. **Understand your textbooks.**
18. **Keep up to date with your schoolwork.**
19. **Write course papers.**
20. **Socialize with others you live with.**