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## Transforming Student Retention in Higher Education Online Programs in California Community Colleges: A Delphi Study

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Transforming Student Retention in Higher Education Online Programs in  
California Community Colleges: A Delphi Study

A Dissertation by  
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Brandman University  
Irvine, California  
School of Education

Submitted in partial fulfillment of the requirements for the degree of  
Doctor of Education in Organizational Leadership

June 2015

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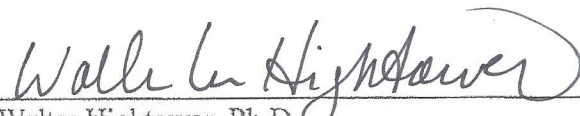
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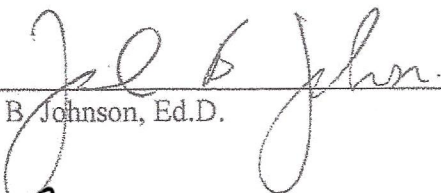
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California Community Colleges: A Delphi Study

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## ABSTRACT

### Transforming Student Retention in Higher Education Online Programs in California Community Colleges: A Delphi Study

by Felix A. Kalinski, Jr.

Economic pressure exists to attract and retain students in higher education online programs in California Community Colleges. Improving student retention is a critical factor for increasing graduation rates to meet educational goals. Student retention is also significant for measuring institutional effectiveness. This study was designed to discover techniques to increase retention among students in online courses at California Community Colleges. This qualitative study used a modified three-round Delphi technique to understand the phenomenon of the consistently lower student retention rates in fully online programs in California Community Colleges, as differentiated to student retention rates in on-campus programs. Delphi panelists provided expert opinions and revealed their concerns about student retention. The data suggested the three general themes that may affect online student retention are: online faculty training, academic advising, and the lack of a separate division for centralized services for use by all of the California Community Colleges. The panelists considered the practices important for increasing student engagement with the institution, which is important for student retention. The panelists believe that the area with the greatest impact over the long term for online student retention within the California Community College system was to establish a separate division for centralized services. These themes are significant to the California Community College system because they support the effective response to the economic pressure through the improvement of online student retention.

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## CHAPTER I: INTRODUCTION

The Commission on the Future of Higher Education was established on September 19, 2005. The purpose of this entity, also known as the Spellings Commission, was to recommend a National Strategy for reforming post-secondary education. The United States economy is fueled by intellectual capital formed by its education system (Pagano & Rossi, 2009). The Spellings Commission (U.S. Department of Education, 2006) posited that U.S. colleges and universities are a key source of the human and intellectual capital needed to increase workforce productivity and growth. The transformation of the world economy demands an educated workforce (Veugelers, 2010). According to the Bureau of Labor Statistics (2005), 90% of the fastest-growing jobs in the new information and service economy required some post-secondary education. There are also many trending career paths likely to require higher education. The Department of Labor (as cited in Hecker, 2005) projected close to four million new job openings combined in health care, education as well as computer and mathematical sciences by 2014 that required higher education.

In 2009, President Barack Obama outlined his plan entitled the American Graduation Initiative to help five million more Americans graduate from college (Swami, 2009). The initiative calls for the United States to reclaim its position as the nation with the highest concentration of adults with postsecondary degrees in the world. The President also noted that jobs requiring at least an associate's degree are projected to grow twice as fast as jobs requiring no college experience (Swami, 2009). According to President Obama, those jobs cannot be filled or kept in the United States without training offered by community colleges. In short, President Obama referred to community

colleges as an undervalued asset, with his program promoting both enrollment and completion of degrees.

In 2004, the state of California developed a new structure of accountability for California Community Colleges (CCCs; California Community Colleges Chancellor's Office, 2013e). The Student Success Task Force recommended the implementation of a new system of accountability, a performance measure for CCCs referred to as the Student Success Scorecard. The Chancellor of CCCs (2013d) released the Scorecard on April 19, 2013.

The CCCs' Student Success Scorecard contains a web-based representation of students' performance in the state's 112 community colleges. The Scorecard reveals how well the community colleges are performing in retaining and graduating students, remedial education, and job-training programs (California Community Colleges Chancellor's Office, 2013d). The scorecard breaks down data by gender, age, race and ethnicity. Although students can use the scorecard to select a campus, its main purpose is to provide data to community college leaders that they can use to target the factors impeding students' performance and design remedies (Dowd & Mara, 2013). The Student Success Scorecard is as an accountability tool; however, it also provides a picture of student retention at a moment in time.

Improving the results on the scorecard alone is insufficient for improving student retention. Student retention refers to the ability to undertake and complete a program of studies to prepare students for the jobs available after graduation (Mortenson, 2005). Improving student retention to meet the demand for educated professionals in the 21<sup>st</sup> century workplace is paramount to U.S. economic growth (Karoly & Panis, 2004). The

success of CCCs requires a focus on improving graduation rates with individuals prepared for the jobs of the new economy in the state of California (Seidman, 2005).

CCCs are turning to technology to help meet the demand for higher education in many jobs. Online programs help educational institutions reach more students than would be possible with traditional classroom delivery of curriculum (Allen & Seaman, 2008). An increase in student online program enrollment created new opportunities and flexibility for students, but online education also created new challenges for the educational community (Sileo & Sileo, 2008). A particularly significant challenge is student retention in online programs, which is lower than traditional, campus-based programs (DiRamio & Wolverton, 2006).

### **Background of the Problem**

President Obama has set an ambitious educational goal for the U.S.; by the year 2020, the United States projected to have the highest proportion of adults with college degrees in the world. The Obama Administration sees the successful completion of postsecondary education as essential to American competitiveness (Schneider & Yin, 2011).

All stakeholders such as administrators, faculty, taxpayers, legislators, and state policymakers recognize that student retention is significant for measuring institutional effectiveness in the prevailing environment of accountability and budgetary constraints (Wild & Ebbers, 2002). Retention is a campus-based phenomenon. By definition, retention focuses on the ability of a particular college or university to successfully graduate the students who initially enroll at that institution (Mortenson, 2005). Seidman (2005) described institutional retention as the measure of the proportion of students who

remained enrolled at the same institution from year to year. Persistence is a measure to describe retention that focuses on the student who leaves one institution to attend a different institution.

The higher education system in the United States is a mixed system of public and private institutions. The National Center for Education Statistics (Snyder & Dillow, 2013) reported that total U.S. college enrollment was 21.0 million students in the fall of 2011. College enrollment is expected to set new records from fall 2012 through fall 2021. Between fall 2011 and fall 2021, enrollment is expected to increase by 13%. As the number of enrollments increase, the corresponding costs of education increase as well.

Graduation rates are an indicator of the ability of institutions of higher education to retain students. The graduation rate for full-time, first-time undergraduate students who began pursuit of a bachelor's degree at a 4-year degree-granting institution in fall 2003 was 57%. This statistic means that 57% of full-time, first-time students who began seeking a bachelor's degree at a 4-year institution in fall 2003 completed the degree at that institution within 6 years (Snyder & Dillow, 2013). The low retention rate has significant costs for students and for the economy. Schneider and Yin (2011) determined that for students who began full time work toward a bachelor's degree but failed to graduate 6 years later, the cost to the nation was approximately \$3.8 billion in lost income, \$566 million in lost federal income taxes, and \$164 million in lost state income taxes.

Improving student retention is a critical factor for increasing graduation rates to meet national educational goals (Waller & Tietjen-Smith, 2009). There is, however, no

commonly accepted definition of retention. A traditional definition used in the full-time university context is “implicitly or explicitly as on-time graduation (within four to five years)” (Walleri, 1981, p. 3). A newer definition of student retention intended to encompass non-traditional students and learning approaches is “the progressive reenrollment in college, whether continuous from one term to the next or temporarily interrupted and then resumed” (Pascarella & Terenzini, 2005, p. 374). Another approach defines retention as staying in school until completion of a degree, and dropping out as leaving school prematurely (Hagedorn, 2005). Other researchers have suggested that a definition of retention should be institution specific because of the variability in the goals and circumstances of students attending the institution (Wild & Ebbers, 2002).

In the longitudinal model of student departure, Tinto (1975) suggested that a student’s personal characteristics, expectations about college life, and adjustment in the transition from high school to college interact with students’ experiences with the institution, creating integration between the student and school. The more fully integrated students become, the more likely they are to persist at that institution (Pullins, 2011). At public Ph.D.-granting institutions in the United States, approximately 22% of first-year college students do not return for their sophomore year (ACT, 2011). Pullins (2011) asserted that knowledge of students’ overall sense of satisfaction with their collegiate experience strengthens predictions regarding whether they were chosen to leave their academic pursuits or remain enrolled in college. Enhancing degree completion rates is not a function of business as usual, but rather requires engaging in new business, such as out-of-the-box, systemic thinking (C. Schroeder, 2013). Morrow and Ackermann (2012) discovered that approximately 35% of students depart a

university because of academic reasons while the other 65% leave a university voluntarily for non-academic reasons. Empowering undergraduate experiences that intentionally foster a higher level of success for large numbers of students can create shared responsibility for educational quality and productivity (C. Schroeder, 2013). As more students drop out of college, the cost of leaving school without a degree rises (Waitsman, 2012). It is vital to help match students to a school that educated them and facilitated graduation to meet the goals set by President Obama in 2009.

There are substantial differences in the retention rates of students based on ethnicity. Snyder & Dillow (2013) discovered 57% of all full time bachelors' students graduate within 6 years, only approximately 37% of African-American and Native American students graduate within 6 years. Institutional graduation rates of full-time, first-time bachelor's or equivalent-seeking students attending 4-year institutions in 2003 were higher at private not-for-profit institutions than at public or private for-profit institutions. For example, the 4-year graduation rate of all bachelor's degree-seeking students was 51% at private not-for-profit institutions, 31% at public institutions, and 13% at private, for-profit institutions (Snyder & Dillow, 2013).

According to the Snyder and Dillow (2013), at 2-year degree-granting institutions, 31% percent of full-time, first-time undergraduate students who began their pursuit of a certificate or associate's degree in fall 2008 attained it within 150% of the normal time required to do so. This measure refers to students who were seeking a 2-year associate's degree and completed the degree within 3 years. The graduation rate was 20% at public 2-year institutions, 51% at private nonprofit 2-year institutions, and 62% at private for-profit 2-year institutions.

In 1999-2000, 42% of all undergraduates were enrolled at public 2-year institutions, commonly known as community colleges (Horn, Peter, & Rooney 2002). About two-thirds of all community college students attend primarily on a part-time basis (Berkner, Horn, & Clune, 2000). Therefore, it takes them longer to complete associate's and bachelor's degrees than the typical time expected—2 years and 4 years of full-time study, respectively.

According to Fike and Fike (2008), retention is important for a variety of reasons. From the institution's perspective, the retention of students is necessary for financial stability and to sustain academic programs. Public policymakers are advocating accountability, and student retention leading to graduation or transfer is a measure demonstrating that public funds are well spent. The Higher Education Opportunity Act of 2008 uses graduation rates as a measure of institutional effectiveness. Retention is also important from the perspective of the student because graduation provides the foundation for future success in life.

Student persistence or withdrawal behavior is related to the importance of person-environment fit, which is a salient influence on the intention to remain in an institution (Pascarella, Smart, & Ethington, 1986). Researchers often use the term persistence as a bridge between student retention and dropout. In the seminal work by Tinto (1975) that built upon the previous influential work of Spady (1970), a framework was developed for an explanatory model of the student persistence and withdrawal process. Tinto's study postulated that students who integrate socially into the campus community increase their commitment to the institution and are more likely to graduate. This study proposed a model of student attrition in which both social and academic factors influence student



dropout decisions. This model, which assumes that persistence and withdrawal are largely determined by the student's integration into the social and academic systems of the institution, has represented a major theoretical advance in attrition research (Hagedorn, 2005).

The research of Pantages and Creedon (1978) determined that for every 10 students who enter college in the United States, only four graduated from that college 4 years later. The work of both Tinto (1975) as well as Pantages and Creedon expanded the research concerning long term persistence of college students. With the exception of Pascarella and Chapman (1983), the research guided by Tinto's study was conducted at 4-year, largely residential institutions (Pascarella et al., 1986). The Tinto study proposed a model of student attrition, which suggests that students' dropout decisions are both social and academic. Tinto's concept of student attrition is important for explaining persistence and attrition in higher education programs. However, these models were developed based on data from on-campus programs. Although the models are broadly relevant to distance education programs, their ability to explain the persistence of online students is limited (Rovai, 2003).

Van Der Werf and Sabatier (2009) proposed that the traditional model of college is changing based on factors such as the proliferation of colleges, hybrid class schedules with night and weekend meetings, and online learning. Students can attend classes online, study part time, take courses from multiple universities, and jump in and out of colleges. Allen and Seaman (2011) determined that after remaining steady for several years, the proportion of chief academic officers indicating that online education is critical to their long-term strategy took an upward turn in both 2010 and 2011. The same

research showed that 65% of all reporting institutions consider online learning as a critical part of their long-term strategy, a small increase from 63% in 2010. These changes to the higher education environment have a variable effect on student retention.

Fike and Fike (2008) analyzed predictors of fall-to-spring and fall-to-fall retention for 9,200 first-time-in-college students who enrolled in a community college over a 4-year period. Their findings highlight the positive impact of developmental education programs and internet-based courses on student persistence. According to Hossler (2005), most colleges and universities do not conduct studies of the efficacies of retention intervention programs. Interventions should be tailored to each institution and then evaluated to make sure they are meeting the unique needs of the institution and its students. At the current time, California has developed an approach to examine the effectiveness of retention intervention programs at its public universities.

The data published by the California Postsecondary Education Commission (2007) show that only 17% of the students tracked by the Commission over 5 years earned a 2-year degree or certificate. In addition, the study demonstrated that 22% of the students tracked transferred to one of California's public universities. The 1960 Master Plan for Higher Education designates CCCs as a primary point of entry—and completion—for post-secondary education in California (Douglass, 2007). The Master Plan (Coons et al., 1960) also provides adequate support for an efficient program of public higher education designed to meet fully the changing needs of society. Today, over 50 years after the Master Plan went into effect, the same quotas for the University of California (UC) and California State University (USC) systems are still in place (Johnson, 2010). When the Master Plan was first established in 1960, post-secondary

education enrollments were divided equally among 2-year and 4-year institutions. However, in 2010, due to a lack of money and funding, the framers of the Master Plan limited eligibility for admission to UC and CSU. The cost-cutting move diverted a large number of students to 2-year institutions, which would still allow them to finish their lower division work and then transfer to a 4-year institution.

The CCCs released the Student Success Scorecard in April 2013 to allow students and their families to compare colleges in the system based on student data. The Scorecard provides completion and persistence rates, as well as data on how effectively colleges move students through remedial and career-technical courses on each of the system's 112 campuses. Each measure is broken down by race, ethnicity, gender, and age. Students and families can also track transfer rates and *momentum points*, such as the percentage of students who complete 30 units—a milestone that is considered to be the halfway mark to transferring to a 4-year institution. The scorecard is significant for improving retention rates at the community college level because it increases accountability, focusing the attention of administrators on establishing programs to increase student persistence in pursuing a degree (California Community Colleges Chancellor's Office, 2013d).

Academic leaders at all types of institutions report increased demand from 2003 – 2006 for face-to-face and online courses, with those at public institutions seeing the largest impact (Allen & Seaman, 2010). In all cases, the demand for online offerings is greater than that for the corresponding face-to-face offerings. Online students at CCCs are experiencing lower success rates than their peers in face-to-face versions of the same courses (Hadsell, 2012).

The CCC system passed a milestone in 2011-12 when more than 50% of the colleges offered at least one degree or certificate via distance education (California Community Colleges Chancellor's Office, 2013a). The periodic report of distance education (California Community Colleges Chancellor's Office, 2013c) stated that 75 CCCs (67%) are serving students in other states. A total of 6,314 students served by those colleges in the 2012 Fall term were outside the state of California and residents of other states.

Technology is inversely related with student-faculty interaction, such that the higher the technology usage, the lower the amount of student-faculty interaction (Ogilvie, 2011). Technology offers compelling reasons to research ways to increase student retention in online classes. Online courses in colleges and universities are growing (Hignite, 2011; Mole, 2012). However, online classes have lower completion rates compared to face-to-face classes (Brown, 2011; Jenkins, 2011).

### **Problem Statement**

The specific problem this research investigated was the issue of lower retention rates for students in online courses when compared to face-to-face courses, which is noted by Allen and Seaman (2010). Despite the trend towards greater use of online courses in higher education, relatively little is known about the factors that lead to lower online retention rates (Boston, Ice, & Gibson, 2011). At the same time, many institutions accept lower retention rates as an inherent characteristic of online courses and do not extensively investigate approaches that can lead to improved online student retention (Bennett & Monds, 2008).

The student success initiative described in the CCCs Chancellor's office (2013a) reported that 60% of the online course student enrollees completed their courses in the 2011 and 2012 academic year. At the same time, 69% of the on-campus students successfully completed their courses.

Academic leaders at all types of institutions report increased demand for face-to-face and online courses, with those at public institutions seeing the largest increase. In all cases, the demand for online offerings is greater than the demand for the corresponding face-to-face offerings (Allen & Seaman, 2010). Despite increased demand for online college offerings as compared to onsite programs based on campus, student retention in online programs continues to be lower than in onsite programs.

### **Purpose Statement**

The purpose of this qualitative Delphi study was to identify the best practices and methods to improve student retention in online programs offered in the CCC system.

### **Research Questions**

This study explored the following research questions:

1. What are the current institutional practices that affect online student retention at California Community Colleges?
2. What are the primary concerns related to the results of current online student retention practices at California Community Colleges?
3. What are recommended future institutional practices and policies to improve online student retention at California Community Colleges?

## **Significance of the Study**

This study is significant because online student retention is an increasing area of importance for the CCC system. Higher education institutions have increasingly embraced online education, and the number of students enrolled in distance programs is rising rapidly in colleges and universities throughout the United States (Kim & Bonk, 2006). The 10% growth rate for online enrollments far exceeds the less than 1% growth of the overall higher education student population (Allen & Seaman, 2010). Online degree programs continue to increase in the United States, which increases the importance of retention for administrators (Allen & Seaman, 2008, 2010; DiRamio & Wolverton, 2006).

At community colleges, there were over 6.1 million students taking at least one online course during the fall 2010 term: an increase of 560,000 students over the number reported the previous year (Allen & Seaman, 2008, 2010). Even modest gains in retention rates impacted a large number of online students. As stated previously, the CCC system passed a milestone in 2011-12 when more than 50% of the colleges offered at least one degree or certificate via distance education. Nearly 27% of all students enrolled in the CCC system take at least one distance education course per term and over 12% of all courses CCC offered are distance education courses (California Community Colleges Chancellor's Office, 2013a).

Despite higher initial enrollments into online programs than into traditional, campus-based programs, student retention in higher education online programs is lower than in on-campus, traditional programs (Allen & Seaman, 2008). Bennett and Monds

(2008) suggested that students are not hurriedly enrolling in online courses, and when they do, they often drop out.

### **Definitions**

According to Casey (2008), the correspondence course became the earliest instructional delivery system within the rubric of distance education. Many distance and online learning-related terms have subsequently also become standard in the educational field (Allen & Seaman, 2008). In order to establish common understanding, the following definitions of terms are presented for the purpose of this study.

*Accredited institution:* In the United States, accreditation is the oldest and best-known seal of collegiate quality (Baker, 2002). There are two primary types of accreditation: regional accreditation and specialized program accreditation. According to Baker (2002), a regionally accreditation commission considers the institution as a whole, evaluates the entire institution using qualitative standards that emphasize achievement of institutional mission and goals, and does not specifically monitor or accredit individual programs or subject content areas. Specialized accreditation associations, in contrast, evaluate individual programs for compliance with quantitative program-specific standards that are independent of institutional mission and goals.

*Community college:* Cohen and Brawer (2003) described community colleges as primarily 2-year public institutions providing higher education and lower-level tertiary education, granting certificates, diplomas, and associate's degrees. Many also offer continuing and adult education. Community colleges are also called junior colleges, technical colleges, 2-year colleges, or city colleges.

*Current institutional practices:* According to Fike and Fike (2008), it is prudent for institutions to determine the characteristics for student success at their particular institution and speak about the relevant professional steps institutions take to focus on how to improve upon what is wrong with the institution.

*Degree-bearing program:* A degree-bearing program is a series of courses offered at an accredited college or university level through which, upon completion, students earn an associate's or bachelor's level degree (Allen & Seaman, 2007).

*Distance education/learning:* Distance education or distance learning is a mode of delivering education and instruction, often on an individual basis, to students who are not physically present in a traditional setting such as a classroom. Distance learning provides access to learning when the source of information and the learners are separated by time and distance, or both (Holmberg, Bernath, & Busch, 2005).

*Higher education:* Higher education refers to a level of education offered by accredited colleges or universities wherein students can work toward an academic degree, such as an associate's or bachelor's degree (Allen & Seaman, 2007).

*Learning community:* According to Sadera, Robertson, Song, and Midon (2009), a learning community is important to pursuing answers to key questions that relate to how student and faculty participation, online interaction, and the sense of community affect student learning and student success in online courses. Student success has been influenced by a number of factors, including activities within a learning environment that promote a sense of community (LaPadula, 2003; McLoughlin, 2002).

*Learning Management System (LMS):* Learning Management System (LMS) is an online platform, delivered via the internet through which online education is most often



delivered (Allen & Seaman, 2006). Institutions may utilize vendors to supply the LMS or may build proprietary platforms.

*Online education/learning:* An online program is an accredited, degree-bearing program offered at a higher education institution where every course in the program can be taken fully online (Allen & Seaman, 2006).

*Persistence:* Persistence is the desire and action of a student to stay within the system of higher education from the beginning year through degree completion (Berger, Ramírez, & Lyons, 2005).

*Retention:* According to Hagedorn (2005), retention is staying in school until completing a degree.

### **Delimitations**

This study was delimited to retention issues and practices in undergraduate, degree-bearing programs that are offered fully online in CCCs.

### **Organization of Remaining Chapters**

The remainder of this study is organized with a five chapter structure, a bibliography, and appendices. Chapter II presents a review of the pertinent literature in student retention in online programs and, specifically, in CCCs. Chapter III discusses the research design and methodology for this work. The chapter includes an explanation of the Delphi Method, and a review of the population, sample, and procedures used to collect the data. Chapter IV presents the analysis and findings of the data obtained from the Delphi panel and discusses the results of the study. Chapter V includes the summary, conclusions, and the recommendations for actions and further research.

## CHAPTER II: REVIEW OF LITERATURE

There has been a substantial amount of discussion and research concerning the issues related to higher education and the retention of students in academic programs at the community college level. Chapter II presents a brief discussion of the history of online education as well as current findings and the theoretical framework related to online learning. This literature review examines the research concerning online retention and describes the historical development of online programs at CCCs. The literature review is organized using the following categories: theory, retention, retention in higher education, online education, retention in online education, retention in community colleges, retention in community colleges in California, and retention in online programs in community colleges in California. The literature review concludes with a discussion of the gaps in the literature.

### **Theory**

Tinto's (1975, 1993) social integration theory provides a model concerning the factors affecting student retention in higher education and for examining the way that online education affects retention. In this model, the student's attitude towards the institution and the educational process is seen as the best predictor of the intention to remain in an academic program. In the longitudinal model of student departure, Tinto (1975) suggested that a student's personal characteristics, expectations about college life, and adjustment in the transition from high school to college interact with his/her experiences with the institution, creating integration between the student and school. The more fully integrated a student becomes, the more likely he/she is to persist at that institution (Pullins, 2011). Several variables affect attitude, including degree of

commitment to the institution, aspiration to obtain the degree, and integration into the social and academic life of the institution (Reason, 2009). Numerous sub-variables such as personality characteristics, socio-economic background, and cognitive skills affect each of these three major variables. In this model, some variables such as socio-economic background of the student are beyond the control of the institution. The institution, however, has control over the variables affecting integration into social and academic life, such as the way it provides opportunities for students to participate in social and academic activities. The general perspective created by the theory is that the educational institution consists of an academic system and a social system and the institution is able to influence the nature and the operations of both types of systems (Meeuwisse, Severiens, & Born, 2010).

A key underlying assumption in social integration theory is that the student passes through three phases during the higher education process. The first phase involves separation from the past, where the student is required to abandon some existing perceptions and practices. The second phase is a transition period in which the student begins to interact with people in a new setting. In the third phase, the student adopts the norms and values of the institution. When the student subjectively perceives that he/she is unable to establish membership in the social and academic community, he/she is more likely to abandon his/her studies (Wolf-Wendel, Ward, & Kinzie, 2009).

Theories concerning retention suggest that students drop out of courses and programs for a variety of reasons. According to Willging and Johnson (2009), adult learners are more likely to drop out of online courses when they do not receive support from their family and/or organization while taking online courses, regardless of learners'

academic preparation and aspiration. This theory also argues that once the course is launched and in progress, course administrators and instructors should consider external factors that might interrupt learners' participation and persistence.

Astin (1984) hypothesized that the more involved the students are with a course or program, the more successful they were in college. Astin's involvement theory differs from the interaction theory proposed by Tinto. Astin developed his involvement theory as an outgrowth of empirical research in an attempt to connect practice to outcomes. In this theory, the institution is important because the "effectiveness of any educational practice is directly related to the capacity of that policy or practice to increase involvement" (p. 298). Research by Astin served to reinforce the importance of student contact or involvement in contributing to a range of student outcomes, not the least of which was student retention.

When discussing involvement theory, Wilmer (2009) postulated that the amount that a student learns and develops as the result of an academic program is directly related to the quality and quantity of involvement that the student invests in the program. In contrast to Tinto's (1975) model, Wilmer proposed that the more a student becomes socially and academically integrated into the college environment, the more committed to graduation he/she was and the more likely he/she was to finish.

In the longitudinal model of student departure, Tinto (1975) suggested that there are explicit connections between the environment found in the academic and social systems of the institution and the individuals who shaped those systems and student retention over different periods of time. In their explanatory models of the college dropout process, both Spady (1970) and Tinto have emphasized the processes of social

and academic integration as critical influences on student persistence. According to Pascarella and Terenzini (1979), the foundation for the longitudinal model perceives student persistence and withdrawal decisions as based largely on the associations between the student and the academic and social systems of the institutions. Tinto stated that dropping out of college is a longitudinal process of interactions between the individual and the academic and social systems of the college during which the person's experiences in those systems continually modify their goal and institutional commitments in ways that lead to persistence or to varying forms of dropout.

### **Online Education**

Online education or online learning are terms referring to web-based training, e-learning, distributed learning, Internet-based learning, web-based instruction, cyber learning, virtual learning, or net-based learning. Online learning is a subset of distance education and embraces a wide set of technology applications and learning processes including computer-based learning, web-based learning, virtual classrooms, and digital collaborations (Weggen & Urdan, 2000). Additionally, it takes the form of complete courses with access to content for *just-in-time* learning and access (Hall, 2000).

Online courses in colleges and universities have proliferated over the last 8 years. In 2003, an estimated 10% of students took at least one online course, which increased to 30% in 2009 (Christensen, Horn, Caldera, & Soares, 2011). Results of a nationwide survey reveal that almost four million students were enrolled in an online course in the fall of 2007. Online courses have increased at a 12.9% annual rate whereas traditional higher education courses increased at only a 1.2% annual rate. Moreover, 33% of baccalaureate awarding institutions view online courses as critical to their strategic plan

(Allen & Seaman, 2008). Two-thirds of chief academic officers believe that there was substantial use of student-directed, self-paced components in future online courses (Allen & Seaman, 2014).

Higher education is increasingly viewed as a major engine of economic development (Altbach, Reisberg, & Rumbley, 2009). Newman, Couturier, and Scurry (2010) advanced the idea the main force of change in higher education flows from the new level of competition and market-orientation among higher education institutions: competition for students, online course offerings, faculty, research grants, athletic titles, rankings, and prestige. Over 90% of community colleges offered online education courses in 2001 (Waits & Lewis, 2003).

According to Allen and Seaman (2014), the proportion of academic leaders who believe the learning outcomes for online education are inferior to those of face-to-face instruction increased from 23% in 2013 last year to 26% in 2014. Some research suggests that the decreasing confidence in online outcomes may be because of the proliferation of online courses in higher education over the past several years and the lack of standardization in content and delivery formats (Mayadis, Bourne, & Bacsich, 2009). In effect, the online educational environment has become similar to the traditional classroom in which variables such as teacher skills and course organization affect outcome.

An emerging trend in online education is the use of the massive open online course (MOOC) in some institutions. The MOOC is an open enrollment course that allows any individual to participate and is often offered without charge (R. Schroeder, 2012). Learning takes place through online discussions and small group research

projects. The students tend to self-organize, which gives them greater control over the learning process and thereby increases their engagement. The literature suggests that the MOOC model is not likely to be used by public universities in California as a route to granting credit to students in the foreseeable future because of the lack of political and administrative support (Kolowich, 2013). Nonetheless, the self-organization aspects of the MOOC may have implications for the way institutions design online courses in the future and the requirement for easier user interface.

Adult learners need to know their reason why they need to interface with online methods and why they are learning new knowledge before they participated (McGrath, 2009). According to Henschke (1998), andragogy is a learning theory defined as a discipline that studies everything related to learning and teaching that would bring adults to their full degree of humanness. According to McGrath (2009), theory tried to identify how adult learners learn and how to involve them in the learning process to free them from the oppression of pedagogy. There are six critical andragogical assumptions in the andragogical model put forth by Knowles, Holton, and Swanson (2005). The assumptions are: (a) the need to know, (b) the learners' self-concept, (c) the role of the learners' experiences, (d) readiness to learn, (e) orientation to learning, and (f) motivation. The andragogy learning theory is centered on the idea that the lecturer does not possess all the knowledge and students are encouraged to participate in the classroom by utilizing their own experiences (McGrath, 2009). The andragogical method is the essential model of adult learning.

Mayadis et al. (2009) proposed that a primary driver for online education is the presumption of faculty and university administrators that a sizable population of potential

learners exists: typically, working adults who wish to obtain college credit and credentials but who cannot do so because of time constraints imposed by work, family, community responsibilities, or lack of proximity to a suitable educational institution. In a recent study of undergraduate students at an American university enrolled in both traditional and online courses, students preferred online courses to the traditional classroom. These students claimed that they learned more in these classes, spent more time on these classes, and found them to be more difficult yet of higher quality than traditional classes (Hannay & Newvine, 2006). In a comparative study, Dabbagh and NannaRitland (2005) examined the differences between traditional and online learning environments and argued that traditional learning environments are: (a) bound by location and presence of instructor and student, (b) presented in real time, (c) controlled by an instructor, and (d) linear in teaching methods. Using evolving information and communication technologies, asynchronous communication, and real-time information, online teaching and learning environments are unbound and dynamic.

### **Student Retention**

Previous research concerning student retention in higher education has produced mixed findings concerning the range of variables that have a significant effect on the decision to remain in an academic program. The research suggests that either student characteristics (Reason, 2009) or institutional characteristics (Crosling, Heagney, & Thomas, 2009) are the dominant factor affecting student retention. Within these two general groups of factors, there are numerous sub-variables that can affect the students' decision to remain in a program.



A review of retention research by Reason (2009) determined that the changing demographics of the student body may have a major effect on retention. A larger proportion of older, female, and minority students are now enrolled in colleges and universities. The research in this area generally suggests that the traditional educational approaches in institutions of higher learning may not meet the needs of the current population of students, resulting in less commitment to the institution and the educational process. The review, however, does not present conclusive empirical evidence to support the argument of the authors.

In contrast to the focus of Reason (2009) on the student characteristics, Crosling et al. (2009) argued that the teaching techniques and methods in an institution represent the critical factor affecting retention. The authors contended that a dynamic interplay exists between student engagement, the quality of student learning, and the approach used for teaching. The authors also noted that the reasons for low retention rates are complex, and multiple factors can simultaneously influence the decision to withdraw from higher education programs.

Tinto's (1993) Student Integration Model attributes student attrition to a lack of social and academic integration into the academic community. The model suggests that when students feel comfortable within the social and academic milieus of the college, they are more likely complete a program. Scott (2005) reported that an estimated 40% of domestic students who started a 3-year qualification in 1998 had completed it after 5 years and 51% left without completing it within the 5 years. At public Ph.D.-granting institutions in the United States, approximately 22% of first-year college students do not return for their sophomore year (ACT, 2011). Pullins (2011) asserted knowledge of

students' overall sense of satisfaction with their collegiate experience strengthens predictions regarding whether they were to leave their academic pursuits or remain enrolled in college. Enhancing degree completion rates is not a function of business as usual, but rather requires engaging in new business, such as out-of-the-box, systemic thinking (C. Schroeder, 2013). Morrow and Ackermann (2012) discovered that approximately 35% of students depart a university because of academic reasons, whereas the other 65% leave a university voluntarily for non-academic reasons. Empowering undergraduate experiences that intentionally foster a higher level of success for large numbers of students can create shared responsibility for educational quality and productivity (C. Schroeder, 2013). As more students drop out of college, the cost of leaving school without a degree rises (Waitsman, 2012).

### **Online Retention**

Allen and Seaman (2014) described the continued growth in online enrollments and propose that it is amplified by institutions with only a few online courses moving to fully online programs. Many institutions have also expanded their online offerings as a means to build enrollment. National studies conducted by the National Center for Education Statistics (NCES) show that the number of institutions offering distance education courses and the number of students enrolling in distance education is increasing (Waits & Lewis, 2003). Even though more students are choosing distance education, the literature shows that attrition rates are higher in online courses than in face-to-face courses (Carr, 2000; Moody, 2004). According to researchers Angelino, Williams, and Natvig (2007), the pervasiveness of high attrition rates is a clarion call to find strategies that encouraged students, educators, and institutions to become more

effective in addressing this issue. The majority of the growth of online programs lies with 2-year associate-granting institutions, as they have accounted for one half of enrollments in online classes course in the last 7 years (Allen & Seaman, 2007). According to Dobbs, Waid, and del Carmen (2009), the growth in course offerings by online means is growing rapidly, although some 4-year universities are still reticent to implement programs on a broad scale. Allen and Seaman (2014) found that the proportion of academic leaders who believe the learning outcomes for online education are inferior when compared to the learning of face-to-face education.

Attrition rates for classes taught through distance education are 10-20% higher than classes taught in a face-to-face setting (Angelino et al., 2007). The increase of online courses and programs in higher education led to a point of view that education had the potential to be more expansive than ever before in U.S. history (Allen & Seaman, 2006; Sileo & Sileo, 2008). According to Johnson et al. (2013), informal learning generally refers to any learning that takes place outside of a formal school setting, but a more practical definition may be learning that is self-directed and aligns with the student's own personal learning goals. Adult students have been reported to have lower retention rates in campus programs than traditionally aged students, which has implications for distance education programs since enrollment in these programs is predominantly adult students, particularly at the graduate level (Rovai, 2003). Patterson and McFadden (2009) argued that students in the online cohorts were significantly older than those in the campus cohorts, so one might assume that the higher dropout rate is possibly a result of an older student population with greater family obligations and job responsibilities. Allen and Seaman (2008) provided support for this argument with

evidence that online students are older and have additional job obligations and family responsibilities than students in face-to-face campus classes.

The higher education community still regards fully online courses with some ambivalence (Jaggars & Bailey, 2010). The research suggests that students who complete online courses learn as much as those in face-to-face instruction, earn equivalent grades, and are equally satisfied (Jahng, Krug, & Zhang, 2007; Phipps & Merisotis, 1999; Sitzmann, Kraiger, Stewart, & Wisher, 2006; Zhao, Lei, Yan, Lai, & Tan, 2005). In contrast, online students are less likely to complete their courses (Beatty-Guenter, 2003; Carr, 2000; Chambers, 2002; K. Moore, Bartkovich, Fetzner, & Ison, 2003). Other research supports the finding that online course retention rates are low and does not provide an understanding of the unique characteristics of students who succeed in online courses, especially at the community college level (Summers, 2003).

According to Jaggars and Bailey (2010), it seems reasonable that the convenience and flexibility of fully online learning were to particularly attract a variety of types of students. It may not be surprising to find well-prepared or advanced students in online classes, given that success in online courses is thought to require high levels of motivation, self-efficacy, persistence, communication skills, and computer literacy (Liu, Gomez, Khan, & Yen, 2007). A primary assumption presented by Allen and Seaman (2008) is that the growth in online course offerings leads to an increase in educational access for those students who are traditionally underserved, such as low-income, rural or inner-city, first-generation, or academically underprepared. These students may struggle with a variety of challenges that limit their ability to attend classes on campus, such as:

child care and other family responsibilities, full-time employment, prohibitive transportation costs, or a time-consuming commute (Jaggars & Bailey, 2010).

### **Retention in Community Colleges**

Community colleges face the problem of lack of information about online student retention. Without information about retention, they cannot support online students effectively because the institution is unaware of the specific characteristics that lead to success or failure in online education (Muse, 2003). The massive expansion of community colleges over the last century substantially increased participation in American higher education, particularly among individuals with limited opportunities for education beyond high school because of academic difficulties, financial constraints, and other factors (Goldrick-Rab, 2010). A substantial proportion of students attending public 2-year colleges enroll with the intention to earn credentials, yet they make little progress toward a certificate or degree (Bailey, Jenkins, & Leinbach, 2007). For example, within 6 years of transitioning to college, only slightly more than one-third of community college entrants complete a credential of any kind (Jenkins, 2006). As community colleges offer more distance education courses and student enrollment in these courses continues to rise (Sikora & Carroll, 2002), educators continue to report course drop out and failure rates among distance learners that are significantly higher than those for traditional, campus-based students (Nash, 2005).

In 1907, California established their community college system as an extension of high schools that offered college-level courses (Little Hoover Commission, 2012). The American Association of Junior Colleges was founded in 1921 and, by 1940, the country boasted 575 two-year colleges, more than half of which were private church-affiliated

institutions (Wright, 2000). In early 1960, the Liaison Committee of the State Board of Education and the Regents of the University of California were asked to prepare a master plan for the development, expansion, and integration of the facilities, curriculum, and standards of higher education in junior colleges, state colleges, the University of California, and other institutions of higher education of the state, to meet the needs of the state during the next 10 years and thereafter (Coons et al., 1960). Since the Master Plan's adoption in 1960, formal revisions to its framework have included: the creation of a statewide Board of Governors for community colleges in 1967; the transformation of the statewide coordinating board into the California Postsecondary Education Commission (CPEC) in 1973; the imposition of student charges (still not called *tuition*) in all three public sectors; and the legislative authorization for the State University to offer its own doctoral degree, the Ed.D., in 2005 (Callan, 2009).

Community colleges continue to work on student success initiatives and institutional standards for student achievement. McClenney and McClenney (2003) postulated that for colleges to know and use data on their students' experiences, they must learn to foster an institutional environment in which planning and decision-making processes at all levels of the institution are data-driven. The results can generate a deeper discussion and awareness of what is impacting student success, specifically long-term completion rates. Such an environment—one in which “institutional and individual reflection and action are typically prompted and supported by data about student learning and institutional performance”—is known as a “culture of evidence” (p. 3).

Conceived as an initiative in 2004, the Lumina Foundation for Education launched Achieving the Dream to help community colleges collect and analyze student

performance data in order to build a *culture of evidence*, enabling the colleges to use that knowledge to develop programs to increase students' academic success (Zachry Rutschow et al., 2011). Achieving the Dream is a network of change dedicated to community college student success. The organization seeks to help students stay in school and succeed. Achieving the Dream is based on the premise that research about community colleges must play a central role in any strategy to increase student success (Bailey, 2005).

### **Retention in California Community Colleges**

Research suggests that online course retention rates in community colleges are low and existing research does not provide a well-developed understanding of the unique characteristics of students (Liu, Gomez, & Yen, 2009). Advocates of online learning, in contrast, argue that technology-enhanced education can lead to superior learning outcomes, and that higher online dropout rates are due not to the medium but rather to the characteristics of students who choose online courses (Howell, Laws, & Lindsay, 2004). Research shows that retention rates are 20% lower in online courses than in traditional face-to-face courses (Ali & Leeds, 2009). Jaggars and Bailey (2010) found that online courses showed no strong advantage or disadvantage in terms of learning outcomes among students.

The CCCs is the largest of California's three segments of public higher education, which also include the University of California and the California State University. With 2.6 million students, the CCCs is the largest system of community college education in the United States (California Community Colleges Chancellor's Office, 2013b). According to Erik Skinner, Deputy Chancellor of CCCs, as part of the Student Success

Act passed by California state legislators in 2012, new community college students who have completed college orientation and assessment and who have developed student education plans were to get priority registration over students who do not meet these criteria (California Community Colleges Chancellor's Office, 2013e).

According to Bahr, Gross, Slay and Christensen (2013), one emerging retention tactic is to give first-time students first-in-line status at registration. Once a privilege reserved for those with the most academic credits, priority registration is now offered to freshmen at some community colleges. In California, every community college were required to offer priority registration at some level by fall 2014 (Jackson, 2013). Priority registration were given to continuing students who are not on academic or progress probation for two consecutive terms, are in good academic standing, and have not exceeded 100 units, not including non-degree applicable basic skills classes. California's Student Success Act grew out of the state's Student Success Task Force, which spent almost 2 years studying ways to improve the community college system and developed a list of 22 recommendations. The core aim of the new law is to put more students on the path to completing their educational goals and thereby help make California more competitive economically (California Community Colleges Chancellor's Office, 2013e).

Research performed by on developing measures to help institutions identify the points at which C. Moore and Shulock (2010) focused students most often stall in their pursuit of a degree, and how to implement more effective practices to improve student outcomes. Their study calculated the percentage of students who reached milestones and the rates of milestone achievement for different groups of students gauged the probability of degree completion. According to Long and Kurlaender (2009), the viability of the



community college transfer function has long been a source of debate. The expectation that community college credits were transferrable can be a motivator for students to complete online courses at these institutions.

According to C. Moore and Shulock (2014), California's Master Plan promises that community college students who have completed a prescribed plan of study with a satisfactory grade point average can transfer to a public university. The authors also noted that this vital transfer function is not working well. A complex process that relies on campus to campus course transfer agreements rather than using a system-wide agreement has led to inefficiencies and low transfer rates (C. Moore, Shulock, & Jensen 2009). Changing this policy is necessary to improve student outcomes and produce college graduates for the workforce. In an effort at creating fundamental reform, the state of California enacted legislation in 2010 requiring the CCCs to develop *associate degrees for transfer* that would facilitate students' admission to the California State University (CSU), with some guaranteed benefits (C. Moore & Shulock, 2014).

The guaranteed benefits include a larger pool of qualified applicants for the California labor market. Reed (2008) asserted that two of every five jobs in California required a bachelor's degree by 2025. Nationwide, more than 60% of all new jobs required some form of postsecondary education, including associate's degrees and certificates as well as bachelor's degrees. For the first time in California history, young adults in California are less likely than older adults to have graduated from college (Johnson, 2010).

The completion rate is important to the local economy. Based upon data from student unit records maintained by the office of the Chancellor, C. Moore and Shulock

(2010) found only 31% of the 2003-2004 cohort of CCC students seeking a degree either obtained a certificate or degree or transferred to a university within 6 years of enrolling. In order to improve completion rates at CCCs, Governor Brown signed into law the California Student Success Act of 2012 (Park, Cerven, Nations, & Nielsen, 2013). The California Student Success Act of 2012 is aimed at improving educational outcomes for students and preparing the workforce for the California economic climate. C. Moore and Shulock found that only one-quarter of CCC students who transferred to a university had earned an associate degree.

### **Retention in Online Programs at California Community Colleges**

Distance education has existed in the CCC system for over 34 years. Although CCCs' distance education students are very satisfied with their distance education courses the CCCs Chancellor's office (2013a) noted the disparity between the retention rate and success rate of distance education courses compared to traditional face-to-face courses. Distance education courses cost the state of California and students millions of dollars a year due to the re-enrollment of distance education students in courses in which they were unsuccessful in or did not complete.

The biggest challenges facing the field of distance education are student retention and successful completion or graduation. The 7-year averages of traditional retention and success rates are 84.5 % and 66.4 % respectively and the 7-year average of distance education and retention and success rates are 77.4 % and 55.9 % respectively. The online graduation rate is lower (California Community Colleges Chancellor's Office, 2013a). California's Community Colleges have cut enrollment by 485,000 students or about 17%, and cut course offerings by 15%, resulting in hundreds of thousands of students being

denied access to classes, increased class sizes, laid-off faculty and staff, and instituted furloughs (Palacios, Johnson, & Leachman, 2013). Of the 2.4 million students enrolled in 2011-2012 academic year in the CCC system, 621,501 took at least one distance education course. Thirty-seven percent of students surveyed in 2011 said they enrolled in at least one distance education course because of the convenience (California Community Colleges Chancellor's Office, 2013a).

Distance education retention rates compared to traditional retention rates from 2010-2012 in California, show annual retention rates have improved. From 2010-2012 to the retention rate improved 2.7%. There is an average retention gap between online education and traditional instruction of 7.1 % over the 7-year period from 2005-2012. Face-to-face retention rates have averaged 84.5% in CCCs from 2007-2012 and the online retention rates are historically lower (California Community Colleges Chancellor's Office, 2013a).

### **Gaps in the Literature**

The first distance education report by the CCC Chancellor's office (2011) was issued in January 2002 and it recognized the extent to which distance education was offered in the community colleges and covered 1995-2000. There was no research prior to this date from a CCC perspective. Recent research shows consistently lower student retention rates in fully online programs in higher education as compared to student retention rates in ground-based programs within the CCC system. The purpose of the current qualitative effort is to use a modified Delphi technique to examine what a panel of 20 experts would identify as priority issues or concerns influencing student retention in

higher education online programs in CCCs. The most recent research in this area was conducted in 2012.

In this more recent effort, more emphasis was placed on the retention issues in the traditional on-campus course offerings. This work gathered recommendations from the experts. The results may have implications for educational leaders' decisions and institutional policies, organizational structures, and instructional activities, especially as they relate to fully online programs. In the 2011-2012 academic calendar year, there were 643,255 online students in the CCC system (California Community Colleges Chancellor's Office, 2013a).

There has been relatively little research examining the range of factors affecting student retention in online programs in CCCs. Some general research concerning student retention indicates that institutional characteristics may play a significant role in the students' decisions to persist in their course of study (Crosling et al., 2009). Although this research suggests that factors such as teaching techniques and methods may affect student retention, there is no certainty that these factors affect student retention at the community college level. Research conducted by C. Moore and Shulock (2010) suggests that transferability of credits can be a factor affecting student persistence in online courses. The finding concerning transferability, however, is only one of many possible factors that can affect student retention in the CCC system. This study determined the influential factors for retention rates of students in online courses compared to face-to-face courses in the higher education programs at California Community Colleges.

## CHAPTER III: METHOD

This study used a qualitative Delphi method to explore student retention practices and issues in CCCs.

### **Overview**

The Delphi method of qualitative research facilitates the collection of expert consensus on any given subject. The current study used a group of experts in the CCC system familiar with online education practices to identify how to improve the retention of online education students in the CCC system.

### **Purpose Statement**

The purpose of this qualitative Delphi study was to identify the best practices and methods to improve student retention in online programs offered in the CCC system.

### **Research Questions**

This study explored the following research questions:

1. What are the current institutional practices that affect online student retention at California Community Colleges?
2. What are the primary concerns related to the results of current online student retention practices at California Community Colleges?
3. What are recommended future institutional practices and policies to improve online student retention at California Community Colleges?

### **Research Design**

The Delphi method is a type of qualitative research study developed in the 1950s as a tool for forecasting and problem solving of complex topics at the Rand Corporation by Norman Helmer and Olaf Dalkey (Buckley, 1995). The Delphi technique is a tool for

soliciting opinions from a group of experts in order to inform a forecasting process (Gordon, 1994; Kaynak & Macauley, 1984; Rosenthal, 1976). In their seminal work on the Delphi technique, Linstone and Turoff (1975) described the Delphi approach as a qualitative method used to systematically combine expert knowledge and opinion to arrive at an informed group consensus on a complex problem. They also defined consensus as *opinion stability* or the collective agreement among members of a group. The Delphi method has been widely used in a variety of environments, and in education the procedure has been employed for curriculum development, institutional planning, and other similar matters (Clayton, 1997).

According to Linstone and Turoff (2002), “underlying any scientific technique, theory, or hypothesis there is always some philosophical basis or theory about the nature of the world upon which that technique, theory, or hypothesis fundamentally rests or depends” (p. 1). The Delphi study relies on a constructivist worldview, which adopts the epistemological assumption that individuals construct an understanding of reality based on their experiences. The typical Delphi study includes a multi-round survey conducted with a group of experts who are anonymous to each other. The rounds continue until the experts achieve a consensus that answers the main research questions posed by the study (Cuhls, 2003). Aigbavboa and Thwala (2012) asserted that the Delphi technique removes the bias that is possible when diverse groups of experts meet together, which is common with other methods of group decision making. According to Powell (2003), consensus can be a watered down version of the best opinion. Linstone and Turoff (1975) stated that the Delphi technique encourages quick replies and poor implementation, posing a threat to reliability and validity.

The purpose of this qualitative study was to use data obtained from a Delphi panel of educational experts to identify their perception of the best practices and methods to improve student retention in the online programs offered in the CCC system. Qualitative research helps to interpret circumstance by examining the meaning from participants' perspectives (Creswell, 2005). A qualitative approach to research is deemed appropriate when a large number of variables that are difficult to identify and measure affect the phenomenon under investigation. At the current time, there is considerable uncertainty concerning the full range of variables that affect retention in online university courses (Burkholder et al., 2013). Using a Delphi study is appropriate when the purpose of the research is to expand a range of possible alternatives to address a specific theoretical or practical problem (Hsu & Sandford, 2007).

The research method was covered in Chapter I, in the Purpose Statement section. An overview of the historical and current literature regarding online education and student retention in CCCs is described in Chapter II. Chapter III includes the chosen methodology and design for this research effort. This chapter includes a detailed description of the three-round Delphi approach.

Norman Dalkey of the RAND Corporation and Olaf Helmer of the Institute for the Future originally developed the Delphi method in 1953 (Boberg & Morris-Khoo, 1992). According to Patton (1997), "the strength of the Delphi approach – lack of face-to-face interaction – is also its weakness" (p. 151). The Delphi technique allows all panelists to remain anonymous, which removes them from pressures encountered in a face-to-face interaction. All ratings and comments are submitted anonymously. For this reason, panel members can change their minds without feeling judged by others in the group (Rowe & Wright, 1999). Despite considerable variance in the application of the

technique, the Delphi methodology used in this study as a powerful communication device for a group of experts (Kurubacak, 2007).

The Delphi study is a qualitative method that obtains information related to a problem under investigation from a panel of experts with unique qualifications or knowledge about the problem. The Delphi method was selected as the research method for the current study because it offers an approach in which experts familiar with online student retention in CCCs can provide a subjective review of the issues and identify best practices to improve online student retention. The consensus among educators is that the technologies taught in today's technology-based world are important to many educators and their students (Stitt-Gohdes & Crew, 2005).

Linstone and Turoff (1975) described the Delphi study as a method for structuring a group communication process. This structure permits a group of individuals, as a whole, to deal with a complex problem. Critical to this communication process are four factors: "some feedback of individual contributions of information and knowledge; some assessment of the group judgment or view; some opportunity for individuals to revise views; and some degree of anonymity for the individual responses" (p. 5). The research technique allows educators to communicate and effectively develop trends, needs, or other factors relative to a particular area of education. In selecting the most appropriate research tool, however, Linstone and Turoff "caution[ed] the researcher to consider the circumstances surrounding the necessarily associated group communication process" (p. 6). They suggested these guiding questions: "Who is it that should communicate about the problem, what alternative mechanisms are available for that communication, and what can we expect to obtain with these alternatives" (p. 6)?



The answers to these questions determine whether a researcher choose the Delphi method as the most effective research tool for the study at hand. The Delphi study relies on the expertise of the panel members, so selecting panelists carefully is vital to the validity of the study. The experts' collective responses may lead to suggested future best practices regarding how to retain more students in online programs in CCCs (Linstone & Turoff, 2002).

Haydarov, Moxley, and Anderson (2013) postulated that the success of higher educational institutions, their public reputations, and their government funding are increasingly based on their ability to retain and graduate students. Nearly 35% of all higher education institutions in the United States are considered fully engaged in offering online courses and programs (Morris & Finnegan, 2009).

The Delphi method is appropriate when statistical measures and other qualitative approaches do not provide sufficient data to address a research problem or support organizational decisions (Goodwin & Wright, 2010). According to Hagedorn (2005), the typical measures of retention/persistence in university courses provide misleading evidence of success and non-success. For example, community colleges, where students frequently take only a few courses, may report disastrous retention rates (Haydarov et al., 2013). The current measures are insufficient to understand the topic and thus hinder researchers from identifying the predictors of student retention in a valid manner (Hagedorn, 2005). According to Hagedorn, inadequate measures add to the complexity of interpreting student retention rates. Vernon (2009) stated, "The Delphi technique is one example of a group of research approaches known as the formal consensus development methods, which are considered where there is limited evidence or where

evidence is contradictory in a given area” (p. 69). Given the uncertainty concerning approaches to measuring university student retention, the Delphi method was deemed a suitable approach for investigating issues and practices related to retention.

According to Linstone and Turoff (2002), “Delphi may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem” (p. 3). The complexities of online student retention are an example of such a complex problem. Coates (1975) stated that the value of Delphi is not in reporting high reliability consensus data, but rather in alerting the participants to the complexity of issues, by forcing, cajoling, urging, and luring them to think, and by having them challenge their assumptions, thereby improving the quality of the effort. As a result of “limited and potentially contradictory evidence” (Vernon, 2009, p. 69) related to student retention in online programs in CCCs, a Delphi technique is an appropriate design for the proposed research effort.

The Delphi method incorporates rounds of written questionnaires and guaranteed anonymity with summarized information and controlled feedback to produce a group consensus on an issue (Beech, 1999). Rowe and Wright (2001) compared Delphi to other structured group procedures such as groups that have been instructed to argue both the positive and negative side of a question, and groups that used a structured form of information exchange. The strength of the Delphi method is its ability to explore issues that require judgment coolly and objectively; a weakness of Delphi is the ease with which questions can be asked for which better techniques exist (Gordon, 1994). In contrast, Rowe and Wright (2001) discovered no clear cut rationale for adopting any of these alternative techniques in preference to Delphi.

The following stages for a Delphi study have been proposed by Beech (1999) and used in this study:

1. Selection of panel (respondents) and allocation of identification numbers.
2. Construction and distribution of first questionnaire (Round 1). Completion and return of Round 1 questionnaire.
3. Collation and categorization of suggestions and construction of second questionnaire (Round 2). Distribution of second questionnaire (Round 2). Completion and return of Round 2 questionnaire.
4. Collation of individual and group scores for each suggestion.
5. Construction of third questionnaire (Round 3), which is similar to Round 2 questionnaire but with individual and group scores for each suggestion from incorporated.
6. Distribution of third questionnaire (Round 3). Completion and return of Round 3 questionnaire.
7. Re-collation of individual and group scores for each suggestion.
8. Possible further rounds of voting and possible request for rationale and comments for more extreme scores.
9. Achievement of group consensus with calculation of summary statistics: maximum, minimum, and range of scores for each suggestion.
10. Distribution and use of findings.

A Delphi study begins with an open-ended questionnaire that is given to a panel of selected experts to solicit specific information about a subject or content area (Custer, Scarcella, & Stewart, 1999). The first phase is the exploration of the topic in Round 1

(Skulmoski, Hartman, & Krahn, 2007). In the subsequent two rounds of the procedure, participants rate the relative importance of individual items and also make changes to the phrasing or substance of the items, completing a process designed to yield consensus (Custer et al., 1999).

The second round of questions are based on issues that did not produce consensus in the answers to the first round of questions. Linstone and Turoff (2002) noted that if there is disagreement in the second round of questions, it is explored in the third round to bring out the underlying reasons for the differences. Because of the disagreements that occur in the response to the questions, the Delphi method is analogous to a controlled debate (Gordon, 1994). After the Delphi panelists appear to have achieved consensus, a final evaluation takes place. The evaluation presents the Delphi panelists with the analysis of the information gathered in the various rounds of questioning for feedback (Linstone & Turoff, 2002). The final round gives Delphi panelists an opportunity to further clarify their judgments of the relative importance of the items.

This study was based upon the expert opinion of a panel of experts in the administration of online education in the CCC system. The Delphi method facilitated the gathering of these opinions without requiring face-to-face meetings since the members of the expert panel are located throughout the state of California. The data for this study were collected using Internet surveys distributed utilizing Survey Monkey. This research from this Delphi study reviewed data gathered in three Delphi survey rounds.

### **Population**

Delphi is a method that requires the selection of a panel of experts related to the subject under study (Clayton, 1997). The study population consisted of education leaders

and administrators whose expertise as in undergraduate higher education online programs at CCCs. The study population or panelists were determined to be experts based on their positions and number of years of working directly with online programs for accredited higher education institutions, in addition to possessing a graduate level education and being familiar with student support tools in an online environment. The characteristics of this population included 5-10 years of work experience in the CCC system. These individuals are responsible for student retention in online programs at the CCC.

Skulmoski et al. (2007) stated, “Selecting research participants is a critical component of Delphi research since it is their expert opinions upon which the output of the Delphi is based” (p. 3). According to Skulmoski et al., Delphi panel members should meet the following requirements: Knowledge of and experience with the specifics of the study topic, the “capacity and willingness to participate” (p. 10), adequate time to participate in each of the Delphi rounds, and “effective communication skills” (p. 10).

This Delphi study included a panel of 27 experts. These education leaders possessed the following titles:

- Campus President
- Chancellor
- Vice Chancellor
- Chief Technology Officer
- Dean
- Faculty Manager
- Faculty Director
- Online Education

- Associate Faculty
- Contingent Professors
- Online Instructional Support Specialist
- Distance Learning Coordinator

Linstone and Turoff (2002) stated the three types of panelists create a successful mix of experts: stakeholders, those who are or were directly affected; experts, those who have an applicable specialty or relevant experience; and facilitators, those who have skills in clarifying, organizing, synthesizing, stimulating. This study ensured that all three types of panelists were included in the study. The panelists were stakeholders in that, at the time of data collection, they currently had, or have had at a recent point in their careers, responsibility for student retention in an undergraduate fully online program. The expert panelists derived from the successful mix were affiliated with online degree-bearing programs at CCCs.

### **Sampling Frame**

According to Okoli and Pawlowski (2004), “a Delphi study does not depend on a statistical sample that attempts to be a representative of any population but is a group decision mechanism requiring qualified experts who have deep understanding of the issues” (p. 20). The sampling frame included 27 individuals identified as leaders in CCCs. One of the most critical requirements is the selection of qualified experts (Okoli & Pawlowski, 2004). According to Geist (2010), stakeholder involvement is crucial when evaluating organizations. There are no exact criteria or standards currently listed in the literature concerning the selection of Delphi participants (Hsu & Sandford, 2007). Concerning the appropriate number of subjects to involve in a Delphi study, Delbecq et

al. (1975) recommended that researchers should use the minimally sufficient number of subjects and seek to verify the results through follow-up explorations.

Depending on the purpose of the study, its complexity, and the expertise required, the sampling frame may include a large panel or small and local, state, national, or international mix (Clayton, 1997). Group size theory varies, but some general rules of thumb indicate a sample size of 15-30 people for a homogeneous population—that is, experts coming from the same discipline (e.g., nuclear physicists)—and 5-10 people for a heterogeneous population, people with expertise on a particular topic but coming from different social/professional stratifications such as teachers, university academics and school principals (Delbecq et al., 1975). The Delphi panel of experts for the current study were 27 education leaders and administrators whose expertise is in undergraduate higher education online programs in CCCs. The panelists were stakeholders that, at the time of data collection, had responsibility for student retention in an undergraduate fully online program in a CCC. The panelists were determined to be experts based on their positions as administrators and had have a minimum of 5 years of working directly with online programs at one of the CCCs. Thirteen CCCs were selected from Northern California and the other 14 from Southern California.

### **Instrumentation**

The four steps for developing an instrument, according to Creswell (2005), include “reviewing the literature, presenting general questions to a target group, constructing questions for the item pool, and pilot testing the items” (p. 160). The present study used a web-based three-round Delphi survey instrument. This Delphi survey instrument consists of three rounds of questionnaires that respondents answer

consecutively. The way the open-ended questions are phrased is important since the resulting data form the basis for closed-end questionnaires in subsequent rounds (Keeney, Hasson & McKenna, 2006). The first round employed a scaled format (Clayton, 1997; Keeney et al., 2006).

Acquiring qualitative feedback on the preliminary questionnaire by the Delphi study participants was the motivation of the pilot phase of the study. The purpose of this phase was to achieve a comprehensive list of accepted and relevant concepts and definitions to be used in the next steps of the Delphi study (Brender, Ammenwerth, Nykänen, & Talmon, 2006).

Round 1 of the instrument included open-ended questions inquiring about online programs and student retention in CCCs (Cook, Brismée, & Sizer, 2006). The first open-ended question in Round 1 asked panelists to identify the subjective factors they deemed to be associated with online student retention in CCCs. The second open-ended question asked panelists to identify objective factors associated with online student retention in CCCs. The use of open-ended questions in the Delphi method is the intellectual apparatus that makes the panelists experts and may reduce any feeling of underutilization (Mitchell, 1991).

According to Cook et al. (2006), Round 2 of the instrument should include a list of descriptor statements that define each subjective and objective factor that is constructed from the work group's qualitative analysis of Round 1. In this study, survey instruments for each round of iteration were designed carefully to encourage the panel of experts to provide prompt responses.



Round 3 of the instrument was composed of the detailed descriptive statements to enhance understanding gained in Round 2. After each round the group response is fed back to participants (Sinha, Smyth, & Williamson, 2011). This Delphi included the following steps:

1. First round analysis identified points of agreement and points of difference.
2. Second round questions addressed only the points of difference.
3. Analysis of the second round identified continuing points of difference.
4. Third round asked questions only about points of difference.
5. After third round, consensus (all points of agreement) was sent to members for acceptance and final comment.

Consensus was defined by the researcher as more than 51% of the respondents being in agreement, which was based on the recommendations of Loughlin and Moore (1979).

### **Data Collection Procedures**

This Delphi study used rounds of written questionnaires and guaranteed anonymity with summarized information and controlled feedback to produce consensus regarding online student retention in CCCs (Beech, 1999). This Delphi study used a questionnaire to obtain information from the members of the expert panel. The related literature provided the basis of the initial questionnaire for the first round of this Delphi study. The questionnaire was emailed to the intended recipients. The Delphi technique allows for flexible data retrieval, such as the use of email or online surveys. The panel experts were asked to reply within 2 weeks. A reminder email was sent to the respondents that did not respond within this period and offer them 1 more week. In Rounds 2 and 3, participants are typically asked to provide answers to questions that arise

from the answers from the panel members to the first set of questions. It was anticipated that three rounds would be sufficient to answer the research questions, although additional rounds can sometimes be necessary (Skulmoski et al., 2007).

Delphi panelists received the letter of introduction approximately 2 weeks prior to the distribution of the first questionnaire. The introduction document included an overview of the study; the proposed timeline for each round in the Delphi study; the expectations of the panel members, including time commitment; an overview of the panel members; and contact information for the researcher.

The first-round questionnaire was posed to the Delphi panel through the survey website SurveyMonkey.com. Panelists were asked to respond to the questions within 7 days. The experts' responses to the initial broad, open-ended question (Linstone & Turoff, 2002) were collected from Survey Monkey. The Analyze Tool in the Survey Monkey software assisted with identifying the themes in the retrieved responses. Panelists reviewed the themes in the second round questionnaire and the responses in terms of perceived impact on online student retention in the CCC segment were collected. In the third and final Delphi round, the top four issues identified from Round 2 were presented, and panelists had the opportunity to respond to questions based upon these issues. Panelists were asked to note how the issue with major impact on student retention corresponded with their initial response to the Round 1 question. Finally, panelists provided their recommendations based on their highest ranked option in the third round.

### **Data Analysis**

Data analysis began after the collection of responses from the panelists in the first Delphi round. Data analysis in the Delphi method is an iterative process that begins with

the data provided by the panelists in the first round and continues until all data have been collected. The data analysis approach relied on content analysis that uses open, axial, and selective coding to identify the themes and patterns in the data (Babbie, 2013). The open coding method identifies the general themes in the data provided by panelists, whereas axial coding establishes the patterns or categories within the various themes. Selective coding prepares the data for presentation to others, which in the Delphi method includes the development of new rounds of questions to obtain additional data from the panelists. The analysis of the data for each round began after all the panelists have submitted completed questionnaires.

The Delphi Round 1 survey allowed members of the expert panel to add opinions based upon their answers to the open ended questions. The Delphi Round 2 survey was developed by including all items from the Delphi Round 1 survey achieving a panel member agreement of 70% or more. After reviewing the data collected from the Delphi Round 2 survey, the Delphi Round 3 survey developed by including items from the Delphi Round 2 survey that were selected by 70% of the panel members. The Delphi Round 3 survey included those items marked for further review by the panel of experts. This round also invited panel members to suggest any further factors affecting online student retention in CCCs.

The final step of this Delphi process involved sending a thank you letter to the members of the panel of experts for participating in this study. Participants were invited to send additional feedback via email to the researcher to be used for further research. The results of the study were sent to each participant along with the thank you note.

### **Informed Consent**

Qualified higher education experts in the CCC system meeting the criteria for inclusion in the Delphi panel received a letter through e-mail soliciting their participation. The letter explained the purpose of the study and their role as a panel member. An informed consent form included as an attachment to the email. Acknowledgement of anonymity and confidentiality included in the informed consent form.

### **Confidentiality**

Confidentiality for the Delphi panelists and the formal study were maintained, and participants were made aware of the process and intent to guarantee confidentiality. In order to ensure confidentiality, the participants were letter coded for identification in all three rounds. Each round was taken completely anonymously. No real names were collected during any portion of the survey rounds. Real names existed only in the electronically signed letters of informed consent. Any printed material was stored in a locked file cabinet and will be shredded after 3 years following the study. Participants can have the opportunity to view the results of the study upon request.

### **Geographic Location**

Participants chosen as panelists in the study were geographically dispersed across the state of California. The participants were representative as part of the CCC system. Communication took place by email and through the survey website, Survey Monkey.

### **Validity and Reliability**

There is no evidence of the reliability of the Delphi method (Hasson, Keeney, & McKenna, 2000). Lincoln (1985) proposed using the trustworthiness approach to establish the credibility of qualitative research methods and findings. The criteria to

establish trustworthiness are credibility (truthfulness), fittingness (applicability), auditability (consistency), and conformability (Hasson et al., 2000).

Validity for the Round 1 instrument included the vetting of the pilot test by five online education administrators in the CCC system to secure understanding, wording, and meaning before releasing it to a panel of experts in the CCC system. The first round survey instrument was pilot-tested with a web-based survey using five individuals who had 5 or more years of experience in the administration of online education in the CCC system. Feedback was codified from the pilot survey participants and several improvements in the instrument were made to the survey before the first round delivery to the panel of experts.

Participants who have knowledge of and an interest in the topic may help to increase the content validity of the Delphi and the use of successive rounds of the questionnaire helps to increase the concurrent validity (Goodman, 1987). Skulmoski et al. (2007) determined that selecting an appropriate number of panelists also helps improve the reliability of a Delphi study, noting that between 15-30 panelists was a sufficient number to identify patterns and themes without producing an overwhelming amount of responses to sort through and record.

As mentioned previously, a pilot study was used to enhance the reliability of this study. Pilot test participants received open-ended questions intended to be the questions for the first Delphi round. The pilot test participants suggested revisions to help ensure clear and unambiguous questions, which are important for establishing reliability for the formal study (Creswell, 2005). The pilot test included 10-12 questions and the questionnaire took about 15 minutes to complete.

## Summary

This qualitative study used a modified Delphi approach and explored the consistently lower student retention numbers in fully online, undergraduate higher education programs in CCCs (Allen & Seaman, 2008). A Delphi panel of 27 professionals in the CCC system identified the relevant issues and concerns regarding student retention in fully online programs in the CCC system.

Panelists provided expert opinions and recommendations to improve online student retention in CCCs. The panelists participated in three Delphi rounds. The data were codified and analyzed to build a consensus of priority issues that may affect retention practices in online programs in CCCs. In each round, issues were polished using open-ended questions (Skulmoski et al., 2007).

A qualitative approach was deemed appropriate for this study as qualitative research examines fewer participants than quantitative research, which may allow the formation of theories based on perceptions, instead of on measurable outcomes (Babbie, 2013; Creswell, 2005). The use of the Delphi technique may lead to future best practices regarding how to retain students in fully online programs more successfully and efficiently (Linstone & Turoff, 2002). The Delphi approach is an appropriate technique when one wishes to “identify recommendations for the future” (Skulmoski et al., 2007, p. 18).

Anonymity is a characteristic of Delphi studies, and anonymity may allow panelists to respond honestly to the questions posed and to other experts’ responses (Linstone & Turoff, 2002; Skulmoski et al., 2007). According to Hsu and Sandford (2007), the Delphi technique provides researchers and panelists alike a flexible and

adaptable tool to gather and analyze the needed data when in engaging in research, evaluation, fact-finding, issue exploration, or discovering what is actually known or not known about a specific topic. The expert consensus may positively influence student retention in higher education online programs. Chapter IV includes the results discovered over the three Delphi rounds.

## CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

This chapter presents the data collected from this qualitative study which used a Delphi technique with a panel of 27 experts who were familiar with online programs in higher education in CCCs. The Delphi panelists were asked to outline the best practices and issues affecting online student retention in the state of California and the best means of improving student retention in online programs in the state.

### **Overview**

The results of this qualitative study were generated from expert recommendations of a group of panelists in the CCC system who were familiar with online education practices and how to improve the retention of online education students in the CCC system. The results of this study may have implications for the state of California's political decisions, institutional policies, organizational structures, instructional technologies, and the quality of online education overall. This chapter contains sections reviewing the purpose statement, the research questions and the methods used in the study. It also contains sections presenting the demographic information about the panelists and the results of the study.

### **Purpose Statement**

The purpose of this qualitative Delphi study was to identify the best practices and methods to improve student retention in online programs offered in the CCC system.

### **Research Questions**

The research questions of the study were as follows:

1. What are the current institutional practices that affect online student retention at California Community Colleges?



2. What are the primary concerns related to the results of current online student retention practices at California Community Colleges?
3. What are recommended future institutional practices and policies to improve online student retention at California Community Colleges?

### **Research Methods and Data Collection Procedures**

The Delphi technique was selected as the research method for the current study because it offers an approach in which experts familiar with online student retention in the CCC system could provide a subjective review of the issues and identify best practices to improve online student retention. Delphi studies do not rely on a statistical sample but rather use a group decision mechanism requiring experts with deep understanding of an issue.

The Delphi study is a qualitative method that obtains information related to a problem under investigation from a panel of experts with unique qualifications or knowledge about the problem. The research effort was initiated using a pilot study. The subsequent responses from the Delphi panel were retrieved using three rounds. After each round, responses were analyzed. Themes were identified and included in the development of the questions for the following rounds. The panelists were given a subsequent survey and the process continued.

The objective of this qualitative Delphi study was to achieve expert consensus after identifying the best practices and methods to improve student retention in online programs offered in the CCC system. The software used to store and manipulate the data was Survey Monkey. The Analyze Tool in the Survey Monkey software assisted with identifying the themes in the retrieved responses in order to ascertain consensus.

Panelists reviewed the themes in both the Round 1 and 2 surveys along with the responses in terms of the perceived impact to online student retention in the CCC system. In the third and final Delphi round, the top five themes identified from Round 2 were presented, and the panelists took the opportunity to respond to questions based upon the emerging themes that surfaced from Round 2. Finally, panelists were asked to note how the theme with the greatest impact on student retention in Round 3 related to the area of online student retention and how it would continue to change the institutional practices to improve student retention in online programs in CCCs. Panelists provided their recommendations based on their highest rank of the central themes and included a narrative description of the future of the theme with the greatest impact in the third round. The Delphi study survey questions aligned with the study research questions by design.

The Delphi panelist responses were retrieved and codified using a three round approach. After each round, the themes were identified and refined during the next round. The detailed discussion of the research method, the process and design for this study is found in Chapter III of this dissertation.

### **Pilot Study**

A pilot study was conducted to help establish the validity of the first round of survey questions. This pilot study was a method to test the initial survey questions with a pilot panel of experts, gain insights to the type of questions and understand what modifications were necessary, if any, to the study in general. The survey for the pilot questions was delivered to the participants without informing them of the identity of the other participants. The structuring of communication with the assurance of anonymity from the other participants is critical to the success of the Delphi technique. Five experts

in online education willing to participate in the pilot study received a letter of introduction and an informed consent form (see Appendix A). Two of the five participants responded and answered the questions. The Pilot Study Survey can be found in Appendix B.

### **Population**

The population for the study consisted of all education leaders and administrators with expertise in undergraduate higher education online programs in the CCC system. The panelists are stakeholders that, at the time of data collection, had responsibility for student retention in an undergraduate fully online program in a CCC. The panelists were determined to be experts based on their positions as administrators with a minimum of 5 years of working directly with online programs at one of the CCCs.

### **Sample**

The sampling frame included 27 individuals identified as leaders in CCCs. Thirteen participants came from CCCs selected from Northern California and the other 14 participants came from CCCs selected from Southern California.

### **Demographic Data**

The Delphi panel of experts for the current study were 27 higher education leaders and administrators including a campus president, a chancellor, a vice chancellor, a chief technology officer, deans, a faculty manager, faculty director of online education, associate faculty, contingent professors, an online instructional support specialist, and distance learning coordinators. The experts were all affiliated with one of the CCCs and had responsibility for student retention in a fully online undergraduate program in a CCC. Table 1 shows the panelists' tenure in the CCC systems. Among the panelists, 30% had

between 15 and 20 years of experience working in the CCC system. Approximately 81% of the panelists exceeded the minimum number of years of experience working directly for the CCC.

Table 1

*Years of Experience at California Community Colleges*

Years of Experience	Percentage
5 years or less	17.39%
5 to 10 years	21.74%
10 to 15 years	13.04%
15 to 20 years	13.43%
20 years or more	17.39%

The participants who were identified met the criteria for expertise based upon their positions as administrators, had a minimum of 5 years of working directly with online programs at one of the CCCs and volunteered for the study. The panelists were discovered using public information on the internet describing CCCs. Table 2 illustrates the years of experience the panelists had working with online programs in the CCCs.

Table 2

*Years of Experience Working with Online Programs*

Years of Experience	Percentage
5 years or less	19.05%
5 to 10 years	28.57%
10 to 15 years	33.33%
15 to 20 years	14.29%
20 years or more	4.76%

The individuals committing to participation in the study received an email as a letter of introduction approximately 2 weeks prior to the distribution of the first questionnaire. The introduction document included an overview of the study; the proposed timeline for each round in the Delphi study; the expectations of the panel

members, including time commitment; an overview of the panel members; and contact information for the researcher. A copy of this document is provided in Appendix C.

### **Presentation and Analysis of Data**

The first group of panelists who were willing to participate emailed their responses and received a letter of intent (see Appendix D), along with the informed consent document (see Appendix A). The Round 1 effort began on January 25, 2015. The panelists responded to the Round 1 survey questions within 7 days. A majority of the participants completed Round 1. Initially, 27 individuals met the criteria and agreed to participate in the study. Twenty-four panelists participated in the Round 1 effort. The data analysis began after the agreed upon 1 week period elapsed and the last survey was submitted. The panelists' survey was delivered using a link generated by Survey Monkey. The panelists entered the survey for each of the three rounds of this Delphi study without knowledge of the identity of the other panelists. After the completion of the first round survey (see Appendix E), themes from the first round of questions were identified using the Analyze Tool in the Survey Monkey.

The second round survey was released to the panelists on February 9, 2015. The participants were asked to complete the instrument in 7 days once again. Eighteen panelists completed the Round 2 survey (see Appendix F) within the requested period of time. The analysis of the Round 2 data was completed within 7 days. Findings from Round 2 were shared with the panelists in the third and final round.

Eighteen panelists completed the Round 3 survey. In Round 3, the panel of experts had an opportunity to reflect on the top five themes they had identified previously that impact online student retention in CCCs. The panelists evaluated the themes as

having the greatest impact, the least impact and the most influence on online student retention in the CCCs over the long term. Finally, the panelists were asked to identify the theme with which they agreed most, describe the future of the theme and outline how it will continue to change the institutional practices to improve student retention in online programs in CCCs. The analysis of the Round 3 data was completed in 7 days. For the purposes of this study, the threshold for consensus was 51% agreement among the panelists.

### **Findings Delphi Round 1 – Narrative and Tables**

Data collection and analysis for this study began on January 25, 2015 and concluded on March 2, 2015. The themes identified from the Delphi rounds were based on the panelists’ responses and refined in each subsequent round. In Round 1, the Delphi method systematically solicits opinions or themes. The central themes that emerged from Round 1 describe opinions from the group of experts and form the basis for the next round of questions. In order to gather consensus or frequency of opinion, the central themes from Round 1 form the basis for the next round of questions. Table 3 reflects the central themes that emerged from Round 1, which included: online faculty training, student services and preparation of online students.

Table 3

#### *Top Three Themes Identified from Round 1*

Theme	Frequency of Theme in Responses
Online faculty training	36
Student services	25
Preparation of online students	20

The expert panelists shared their priority issues and opinions in Round 1 regarding online student retention practices in CCCs. The Round 1 survey also allowed

members of the expert panel to add opinions based upon their answers to the open ended questions. Categorization of the initial themes identified by the panelists related to the issues presented in Table 4.

Table 4

*Themes and Related Statements from Round 1*

Theme	Related Statements
Faculty training	<ul style="list-style-type: none"> <li>• Educational web and curriculum design as it relates to pedagogy and andragogy.</li> <li>• Faculty should collaborate to develop courses.</li> <li>• Faculty need to be trained how to proactively communicate with students on a regular and timely basis.</li> <li>• Faculty training on best online practices to ensure a continual connection with students registered in a class.</li> <li>• Best use of rubrics.</li> <li>• Align course outcomes with module objectives and activities.</li> <li>• Faculty training in best practices in managing an online course.</li> <li>• Training in how to balance labor issues.</li> <li>• Consistent in faculty training and in the assignment for online teaching.</li> <li>• Creating a positive work environment.</li> </ul>
Student services	<ul style="list-style-type: none"> <li>• Student orientation to the CCC.</li> <li>• Tutorial and technical support.</li> <li>• Student readiness and orientation for online learning.</li> <li>• Established attendance policies.</li> <li>• Academic advisors and related student services dedicated for online students on campus.</li> <li>• Integrated online student services like academic advisors and related student services.</li> <li>• Academic advisors conduct a rigorous, required pre-assessment preparation prior to enrollment ensuring students are technologically and psychosocially prepared for the demands of online learning.</li> <li>• Frequent assessments with feedback.</li> <li>• Availability of technology for all students regardless of social economic background.</li> <li>• Consolidated student support services.</li> </ul>
Preparation of online students.	<ul style="list-style-type: none"> <li>• Academic advisors must communicate course expectations to online students.</li> <li>• Academic advisors will review the course syllabus with the online students to ensure the student understands the relevance and progression of the course and how it fits with subsequent courses.</li> <li>• Academic advisors need to understand the online student has a reasonable expectation of success prior to enrollment.</li> <li>• Virtual Academic advisors that are available 24 hours per day.</li> <li>• Require participation in an online community.</li> <li>• Distance education resources devoted to online students such as: digital readiness, readiness assessment and a gatekeeper course a prospective online student could test drive to see if an online course is suitable to their learning style.</li> <li>• Assess and remediate technology skills for online students.</li> </ul>

The practices that could improve online student retention in the CCCs are described as the Round 1 Themes in Table 5.

Table 5

*Round 1 Themes to Improve Student Retention in the CCCs*

Practices	Frequency of Theme in Responses
Standardized technology platforms	3
Set up faculty academies for training	6
Centralized provision of online student support	3
24/7 help desk staffed by learning coaches	7
Faculty and peer interaction online	1
Create an online division within a college	1
Impact of a large number of part-time instructors	5
Create a culture with the CCCs	7
Online school or separate division for centralized services	6
Student connectives and communication, advising	2
Counseling via Skype with course previews before class	6
Tutoring for students prior to and throughout online class	5

**Findings Delphi Round 2 – Narrative and Tables**

After the data analysis from Round 1 was completed, the second round survey was constructed and sent to the panelists (see Appendix F). During the second round, the panelists were asked to evaluate 11 themes identified in Round 1 that did not reach the threshold for consensus. The priority in Round 2 was to explore the responses from Round 1 where there was some agreement. Table 6 shows the 11 themes identified from Round 1 that did or did not reach the threshold of consensus in Round 2.

The eight themes identified to reach the threshold of consensus in Round 2 were described by the panelists in their responses to the open ended questions found in the survey for Round 2 (see Appendix F). Panelists in Round 2 suggested that following themes were critical factor in online student retention.



Table 6

*Eleven Themes Identified that Did or Did Not Reach Consensus in Round 2*

Theme	Panelist responses	Consensus
Faculty training academies	10 of 18 respondents	Yes
Virtual learning coaches 24/7	13 of 18 respondents	Yes
Hire full-time Professors	10 of 18 respondents	Yes
Survey online students week one	17 of 18 respondents	Yes
Centralized learning system	9 of 18 respondents	No
Alternative compensation professors	9 of 18 respondents	No
Online counseling via Skype	14 of 18 respondents	Yes
Online tutoring	10 of 18 respondents	Yes
Manage funding of CCCs	9 of 18 respondents	No
Separate division for centralized services	12 of 18 respondents	Yes
Create a culture at the CCCs	15 of 18 respondents	Yes

**Faculty training.** Panelists offered an idea to create faculty academies to support the faculty training process for both full-time and adjunct instructors. One panelist observed:

A centralized teaching excellence center would eliminate the need for these at each community college.

There is a precedent for this model in other states and it is efficient in terms of both time and labor, resulting in well-trained faculty members. The centralized teaching excellence center or academy could be set up as a separate academic division so all staff members take ownership of their online course development beginning with focused student learning outcomes. One panelist noted that:

The academy should be staffed by experienced professionals in instructional design. The academy might consider the model in the private sector where the instructional designer would distill the content from a subject matter expert and develop the course in Blackboard or another LMS. The academy could partner with the educational institutions in the private sector to achieve critical mass quickly and conserve cost.

An enhancement to the academy could include a mentor program to access the class website. The mentor provides advice and guidance during the course delivery,

especially during the first term the instructor is teaching the online course. Mentors would encourage the professor by providing guidance for methods related to effective and timely feedback to students, facilitating instructor to student engagement, promoting student to student engagement, and collecting feedback for course improvement.

**Academic advising or learning coaches.** The panelists agreed that seamlessly embedding academic advisors or learning coaches in a course management system available 24 hours per day, 365 days per year would improve online student retention. Although it was not clear how this would affect the budget, the panelists supported the idea. The panelists also introduced the concept of a virtual concierge on the computer available 24 hours per day to answer questions. One panelist outlined,

The virtual concierge would foster the development of an online community to help students navigate through their first course and mandatory introduction to online courses in the CCC. The virtual academic advisors or learning coaches could support students through screen sharing and video tools to support student efforts and advise them on course schedules. The approach would aid in retaining students who might otherwise feel lost or who are overwhelmed in an online course.

**Hire full-time professors.** The panelists believed the large numbers of part-time instructors in the CCCs have a major impact on all teaching in the system. The panelists identified various factors related to having a large number of part-time faculty. These factors include: the adjuncts are better trained and have a positive impact on the quality of online teaching; the quality varies greatly because of unstandardized curriculum and the numerous online strategies in each of the CCCs; few part-time instructors are included in various meetings and committees due to scheduling conflicts; part-time instructors work elsewhere and have less time for training; all of the CCCs have different approaches so standardization of training is difficult; the part-time instructors may also

feel their compensation does not warrant the extra time required for training at one CCC; the imbalance in income is the result of teaching at multiple CCCs or outside institutions which can dilute both teacher quality and student experience.

**Online counseling via Skype.** The implementation of online counseling via existing technology such as Skype was put forth as a concept that could influence online student retention. The panelists consistently approved of the use of counseling via existing technologies such as Skype or in-person counseling prior to taking an online course combined with a preview of the course along with its requirements and various assessments to determine if students will succeed in the course. The panelists also noted that student success is a complex phenomenon, as the CCC student often works and has a family. A personal connection with an advisor can prevent students from falling behind. The course preview would give students more information about what to expect. In the CCCs, many online students are lost before the 2-week point because they did not know what they were signing up for in terms of online college work. There is no research to support this assumption which is based on personal experience from one of the panelists.

**Online tutoring.** Online tutoring was identified as an issue meeting the criteria for consensus in Round 2. It is possible to offer online tutoring on demand at all hours in real time. The entry courses in writing, math, or economics would be suited to this concept. The panelists believed that just-in-time help for students would reduce the frustration that often leads to withdrawal from courses. The course management system could include a button for a pop-up tutor. Instructors need to partner with and promote the integrated online tutoring to encourage the online students to take advantage of such

tutoring opportunities. The panelists agreed that online tutoring needs to be part of the readiness program in distance education at the CCCs.

**Separate division for centralized services.** The separate division for centralized services could establish an in-person or virtual presence without competing with the CCCs. The panelists were unclear whether to organize centralized services as a separate online school or as an independent CCC. However, the panelists agreed on the need for centralized services utilized by all CCCs. A separate centralized division requires a separate funding stream achieved through a fee levied on the population of distance learners utilizing services, many of whom are out of state. Funding could be redirected from the current budget and could be largely self-sufficient. There should be a minimum standard for who will design courses offered through the centralized division, with the designers having a minimum of a Master's degree in Instructional Design. The mission statement of the centralized division should prioritize online student retention. The division would be capable of developing localized courses to provide for the learning needs of various groups such as underrepresented minorities, LGBT (lesbian, gay, bisexual, and transgender) students and disabled students. This separate division would serve as the link between the CCCs and the business communities in each region to assure the training received meshes with the needs of the job market. The centralized services division will produce video clips and animations to explain complex processes online quiz designs, hold conference calls with guest speakers, host online labs for students, and provide any support materials to enhance the online classroom experience.

**Create a culture at the CCCs.** In order to create a culture in the CCCs that values online education and enrollment, the panelists determined that it is critical to

sharing student success stories along with recognizing the work of instructors by local districts. As cultural awareness grows, reporting regular graduation rates of online courses and the fiscal impact of those graduation rates to the Chancellor's office supports the value proposition of online education in the CCCs. In turn, the value proposition at the grassroots level is evaluated by quality audits at scheduled times. The CCC system can create quality awards for online courses of superior quality, such as those that implement strategies to produce greater success and retention rates than onsite classes. As the number of awards for best course and teaching increase, this will add to the culture of success at the CCCs. At the same time, the Chancellor's office will support the legitimacy of online education and establish a culture of success.

**Survey online students, week one.** Panelists described this theme as merely a data gathering technique and offered no ideas for specific action that would increase online retention. Students who have already decided to drop a course by the end of week one will not take the survey. One panelist observed,

The most important determinant of retention and success is a just-in-time connection with online students who have questions about course content. A survey must not stand alone at the end of week one in terms of satisfaction but rather be an integral part of online students' course interaction and answer questions about course content, for example.

### **Findings Delphi Round 3 – Narrative and Tables**

When the data analysis for Round 2 was finished, the third round survey was constructed and sent to the panelists (see Appendix G). In Round 3, panelists had an opportunity to consider the themes identified in the previous round. The priority in Round 3 was to refine the Round 2 data in order to determine consensus regarding the emerging themes concerning the potential for the greatest impact on Online Student

Retention with the CCCs. Table 7 shows the five themes identified in Round 2 that reached the threshold of consensus with the potential for the greatest impact on online student retention within the CCC; these themes were evaluated subsequently in Round 3.

Table 7

*Five Themes Identified with Consensus and Potential for Greatest Impact in Round 2*

Theme	Potential of Greatest Impact
Survey online students week one	1 out of 5 for themes with consensus
Create a culture at the CCCs	2 out of 5 for themes with consensus
Online counseling via Skype	3 out of 5 for themes with consensus
Virtual learning coaches 24/7	4 out of 5 for themes with consensus
Separate division for centralized services	5 out of 5 for themes with consensus

The five themes identified by the panelists in Round 2 with the greatest impact on online student retention with the CCC system were surveyed in Round 3. The purpose of Round 3 was to explore these emerging responses from the previous rounds and determine the areas in which consensus existed. The survey in Round 3 served to confirm these responses and reveal panelists' perspectives and observations. As an integral part of Round 3 survey, the panelists were asked four questions about the five themes identified with consensus (see Appendix G):

1. What theme would have the greatest impact?
2. What theme would have the least impact?
3. What theme would have the most influence over the long term on online student retention?
4. As it relates to the area with the influence with which you most agree, what is your recommendation related to the area for the future of that area and how it will continue to change the institutional practices to improve student retention in online programs in California Community Colleges?

The panelists described the need to fund centralized services. One panelist described the centralized services concept as effective for providing a student benefit. Although four out of 18 panelists in the Round 3 supported the Online Education Initiative (OEI), the balance of the experts described the need to incorporate methods used by other schools that have demonstrated best practices and maintained high retention rates such as: Rio Salado College in Tempe, AZ. It is necessary to consider using other methods than the traditional community college methods. New methods should be considered from outside the comfort zone of the CCC system. Three of the panelists supported a stand-alone entity: a separate CCC online college. The separate CCC online college entity was deemed to have the greatest long-term impact due to the level of expertise and resources. Consensus was achieved around this theme regarding the need for centralized services to be utilized and in support of the entire CCC system. The separate CCC online college would not be a competitive entity but rather would support the overall CCC system.

When considering academic advisors serving as learning coaches 24/7, the concept achieved consensus, with the panelists believing the measure would impact student learning, support, and success. One panelist outlined how a program could be implemented through volunteer learning coaches (retired teachers), recruiting part time faculty to serve in this role, and/or work study opportunities for graduate students. In support of this theme, another panelist described the most important determinant of retention and success is a just-in-time connection with online students who have questions about course content or who may not understand how the LMS works. The concierge or learning coach, like the customer service reps in Amazon's Mayday service,

would be trained to provide basic guidance and would encourage students to contact the instructor if they misunderstood what the instructor wants. The concierge could also direct the student to online tutoring and other assistance. One panelist noted that:

The learning coach idea is the most labor intensive but is the closest we can get to one student turning to another student in a face-to-face class and asking questions such as: what's going on? Are we having a quiz next time?

This connection is essential and could be implemented as a small pilot program that would lead to an expanded service. The panelist also indicated that the program would be difficult and expensive to implement because of uncertainty as to how many students could one concierge could handle. The panelist asked,

Can you imagine a friendly face in a video pop-up window might be welcomed by students and if the process could get students over the hurdles in the first 3 weeks and how the students would gain skills for the rest of the term? It's not too much hand-holding since the concierge would not do the work, just point to how to use the LMS and the resources available.

Minimum tech standards for students would be required so students could actually access the service when needed. As the LMS becomes more mobile-oriented, the system mirrors what Mayday icon does for Amazon's Fire tablets.

The purpose of Round 3 was to confirm the five themes identified by consensus and to show the panelists' perspectives where consensus existed. Table 8 describes the five themes that achieved consensus and outlines the panelists' perspectives.

Table 8

*The Five Themes with Consensus and Panelist Perspective in Round 3*

Theme	Panelist Perspective
1. Academic advisors	Learning coaches during the day that could function as a virtual concierge on the computer 24 hours per day.
2. Survey students at the end of week one	Survey is just be a data gathering technique and offer no ideas for specific action that will increase online



3. Counseling using Skype	retention. See some immediate results if students were advised very early by counseling before they even began an online course on how to succeed.
4. Creating a culture at the CCCs	Using student success stories. Best online teaching awards. Report graduate rates from online courses.
5. Set up an online school or use the OEI	Centralized services to be utilized and support the CCCs.

Panelists in Round 3 suggested that the item with the greatest impact for online student retention was to set up a separate online school or to utilize the Online Education Initiative (OEI) or other entity. The OEI is a pilot initiative at 24 CCCs to increase student success and completion in online education. The approach would create a culture at the CCCs using student success stories, distribution of best online teaching awards for online instructors, and dissemination of reports from the Chancellor’s office on the graduation rates from online courses. This method would include a showcase of students who have transferred successfully to 4-year institutions to motivate students and fulfill part the mission of the CCC. The CCC can utilize the OEI to fulfill its mission to improve retention and the success of students enrolled in Online Course Exchange courses; increase ease of use and convenience of the online experience; decrease the cost of student education and, significantly increase demand for online course delivery. The separate online school would serve as a way to provide centralized services to the CCC system without competing with the CCC. The panelists also recommended incorporating methods used by online schools that have demonstrated best practices and maintained high retention rates. One panelist stated “don’t use the same community college methods that have gotten us to where we are—use methods that are proven but that may be outside our comfort zone.”

Four of the 18 respondents to the survey in Round 3 supported the OEI. The panelists suggested that funding for the OEI should be made permanent (it is currently funded for a total of 57 months) and its offerings expanded to include Career Technical Education (CTE). They also recommended funding for centralized services to encourage the colleges to take advantage of them and provide a benefit for the students. Some panelists offered alternative views of centralized services and cultures. As one panelist pointed out,

It is important to develop a culture that expects and enables innovation and sharing of effective and promising practices. Data is important but it should always be shared with plenty of contextualization. Personal anecdotes are important but they too require contextualization. Colleges should share with each other not only stories that are directly about good practices in online teaching and support but also stories about how to effect cultural changes that enable better success and retention in online education.

Some panelists suggested that a separate online CCC should be established as a stand-alone entity because it would have the greatest long-term impact due to the level of expertise and resources. Three panelists supported this notion. The balance of opinion in this area focuses on the need for centralized services; all of the panelists described this need.

### **Results: Research Questions**

The panelists offered a variety of responses that aligned to the research questions of this study.

#### **Research Question One**

Research question one asked: What are the current institutional practices that affect online student retention at California Community Colleges? In response to the first research question, the panelists shared a variety of comments regarding the current

institutional practices that affect online student retention at CCCs. The following list presents the 10 most important institutional practices outlined by the panelist that affect online student retention.

1. Course design
2. Faculty training
3. Online student technical support (i.e., help desk)
4. Online student orientation
5. Faculty technical support
6. LMS ease of use
7. Student services for online students
8. Ease of registration
9. Sense of community/belonging
10. Engaging course content/activities

### **Research Question Two**

Research question two asked: What are the primary concerns related to the results of current online student retention practices at California Community Colleges? The panelists described the primary concerns of the current online student retention practices at the CCCs. The following list contains the six most important concerns regarding the current online student retention practices at the CCCs institutional practices outlined that affect online student retention.

1. Limited financial resources
2. Lack of training for staff/faculty
3. Lack of understanding of importance of supporting online students

4. Balancing growth of online programs with adequate student support
5. Changing technology requirements/needs
6. Lack of motivation

### **Research Question Three**

Research question three asked: What are recommended future institutional practices and policies to improve online student retention at California Community Colleges? The expert panelists were asked to identify what new practices could improve online student retention in CCCs. The themes perceived as having the greatest impact upon student retention included setting up centralized services and utilizing virtual learning coaches. These two themes determined to have the greatest impact were based upon panelist consensus.

### **Summary**

The results of the data collection for this study were presented in Chapter IV. The purpose of this Delphi study was to explore best practices in online student retention and understand ways to improve online student retention in the CCC system. The panelists, experts in their field, shared their recommendations for future online student retention practices in the CCCs.

This Delphi study explored the emerging responses from the previous rounds where there was agreement. It also confirmed these responses and showed the panelists' perspectives. In the final round, consensus was developed and the panelists in Round 3 suggested the item with the greatest impact for online student retention is to set up a separate online school or to utilize the OEI or other entity. The other factors with the greatest impact for online student retention in the CCC included: survey online students

during week one, create a culture at the CCCs, offer online counseling via Skype, and make virtual learning coaches available 24/7. All of these concepts emerged in Round 3 as concepts that achieved consensus with the panelists believing the measures would impact student learning, support, and success.

The findings, implications, and suggestions for future studies are discussed in Chapter V. This chapter will include a summary of the study, the study's purpose, conclusions, and comments. The implications of this study and recommendations for future studies are reviewed.

## CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

President Obama views the successful completion of postsecondary education as essential to American competitiveness (Schneider & Yin, 2011). Improving student retention is a critical factor for increasing graduation rates to meet national educational goals (Waller & Tietjen-Smith, 2009). Allen and Seaman (2010) noted the issue of lower retention rates for students in online courses when compared to face-to-face courses. At the same time, many institutions accept lower retention rates as an inherent characteristic of online courses and do not extensively investigate approaches that can lead to improved online student retention (Bennett & Monds, 2008).

The student success initiative described by the CCC Chancellor's office (2013a) reported that 60% of the online course student enrollees completed their courses in the 2011 and 2012 academic year. At the same time, 69% of on-campus students successfully completed their courses. Academic leaders at all types of institutions report increased demand for face-to-face and online courses, with those at public institutions seeing the largest increase. In all cases, the demand for online offerings is greater than the demand for the corresponding face-to-face offerings (Allen & Seaman, 2010). Despite increased demand for online college offerings as compared to onsite, campus-based programs, student retention in online programs continues to be lower than in onsite programs.

### **Purpose**

This study examined expert panelists' experiences, perceptions, and opinions to discover techniques to transform retention rates for students in online courses compared to face-to-face courses in the higher education programs at CCCs using a Delphi method.

The recommendations of the panelists may have implications on fully online programs in CCC higher education leadership decisions, institutional policies, organizational structures, and instructional activities. The specific focus of the study was to collect responses from a Delphi panel of experts and analyze their opinions regarding practices that might affect online student retention in the CCC system. The purpose of this qualitative Delphi study was to identify best practices and methods to improve student retention in online programs offered in the CCC system.

### **Research Questions**

The research questions that guided this study were:

1. What are the current institutional practices that affect online student retention at California Community Colleges?
2. What are the primary concerns related to the results of current online student retention practices at California Community Colleges?
3. What are recommended future institutional practices and policies to improve online student retention at California Community Colleges?

The Delphi method was used as a structured communication tool between the researcher and the panelists to gather expert opinions and recommendations regarding how to improve online student retention in CCCs. The panelists participated in three Delphi rounds. The data were codified and analyzed in order to yield consensus about issues that may affect retention practices in online programs in CCCs. In each round, issues were refined using open-ended questions (Skulmoski et al., 2007). The use of the Delphi technique may lead to future best practices regarding how to retain students in fully online programs more successfully and efficiently (Linstone & Turoff, 2002). The

Delphi approach is an appropriate technique when one wishes to “identify recommendations for the future” (Skulmoski et al., 2007, p. 18).

Delphi is a method that requires the selection of a panel of specialists with expert knowledge about the subject under study (Clayton, 1997). The study population consists of all education leaders and administrators whose expertise is in undergraduate higher education online programs at CCCs. The study population or panelists were determined to be experts based on their positions and number of years of working directly with online programs for accredited higher education institutions, in addition to possessing a graduate level education and being familiar with student support tools in an online environment. The characteristics of this population included 5-10 years of work experience in the CCC system. These individuals are responsible for student retention in online programs at the CCCs.

### **Population**

This Delphi study included a panel of experts of 27 individuals. These education leaders possessed the following titles:

- Campus President
- Chancellor
- Vice Chancellor
- Chief Technology Officer
- Dean
- Faculty Manager
- Faculty Director
- Online Education



- Associate Faculty
- Contingent Professors
- Online Instructional Support Specialist
- Distance Learning Coordinator

Linstone and Turoff (2002) described three types of panelists that create a successful mix of experts: stakeholders, those who are or will be directly affected; experts, those who have an applicable specialty or relevant experience; and facilitators, those who have skills in clarifying, organizing, synthesizing, stimulating. The researcher ensured that all three types of panelists were included in this study.

### **Sampling Frame**

According to Okoli and Pawlowski (2004), “a Delphi study does not depend on a statistical sample that attempts to be representative of any population but is a group decision mechanism requiring qualified experts who have deep understanding of the issues” (p. 20). The sampling frame included 27 individuals identified as leaders in CCCs. Thirteen participants came from CCCs selected from Northern California and 14 participants came from CCCs selected from Southern California.

### **Major Findings**

Results from the Delphi rounds produced the following emergent themes that may affect online student retention in the CCC system:

- Online faculty training
- Academic advising
- Separate division for centralized services

The emergent themes can be linked to the literature related to online learning frameworks and to the seminal work for this study.

### **Online Faculty Training**

In Round 1, the panelists were asked: what are the primary concerns related to the prioritized institutional practices that influence student retention in fully online programs in the CCC system? Twenty-four panelists answered this question. After all the responses were collected, three emergent themes were identified. The emergent theme of online faculty training was identified most frequently, 36 times by 19 of the 24 panelists, or 79% of the experts participating in Round 1.

The expert opinion concerning the value of online faculty training is a method of providing ongoing institutional support related to Tinto's theory on student retention. Tinto's (1975, 1993) social integration theory provides a model concerning the factors affecting student retention in higher education and for examining the way online education affects retention. In this model, the student's attitude towards the institution and the educational process is the best predictor of his/her intention to remain in an academic program. One panelist stated,

From my observations during nearly 20 years of Community College teaching at Colleges in 7 districts, it appears that most colleges have a single Instructional Design Expert whose job it is to administer Blackboard or other LMS. Online courses are currently assigned to faculty with only a bare minimum of training in distance learning.

Online student retention is linked to a student's sense of academic and social connection to the institution. In the longitudinal model of student departure, Tinto (1975) suggested that students' personal characteristics, expectations about college life and adjustment to the transition from high school to college interact with their experiences

with the institution creating integration between the student and school. The panelist continued,

Many of our faculty prefer a face-to-face model, however, they need to experience the good and bad that comes with an online environment to be prepared to instruct in one. The online model would nurture their need for student interaction while encouraging a growth of knowledge about how it feels to be an online student and the need for substantive contact with your course instructor or facilitator and your classmates.

The online faculty training theme from Round 1 helps to integrate the student online experience improving the academic and social connection to the institutional experience.

### **Separate Division for Centralized Services**

Eighteen panelists participated in Round 2 and 3. Insights gained in Round 2 suggested that the CCC system needs to centralize and leverage services. The emergent theme of establishing a separate division for centralized services was identified frequently, 25 times by 14 of the 18 panelists, or 72% of experts participating in Round 2. The panelists agreed on the need for centralized services utilized by all of CCCs. However, the panelists were unclear whether to organize this entity as a separate online school, as an independent CCC or to utilize the existing OEI with funding as a major constraint. The panelists did indicate that a virtual presence that does not compete with the CCC system is critical to online student retention. The panelist described,

I need online resources that enhance my classroom teaching. I need a wide selection of free videos (clips) and animations to explain complex processes. I need online quizzes. I need conference calls for guests. I need labs online. I do not want these things to cost the student a bundle of money. And I am disappointed in what publishers provide through the narrow bottleneck of websites for the course textbook. The resources I need should not come from overpriced textbooks.

This emerging theme is also linked to the literature related to online learning frameworks in the work of Pascarella and Terenzini (1979) on their longitudinal model of student retention, Fike and Fike (2008) on the predictors of retention, and Tinto's (1993) seminal work. The panelist noted,

It is key to take advantage of the capacity that exists to offer online courses across the CCC system, and streamline the process for students to find, enroll in, and take those courses.

According to Pascarella and Terenzini (1979), the foundation for the longitudinal model perceives student persistence and withdrawal decisions as based largely on the associations between the student, the academic and social systems of the institutions. The separate division for centralized services promotes one location as an online community for virtual student needs. The separate division for centralized services is an online community capable of developing localized communities within each CCC.

Fike and Fike (2008) analyzed predictors of fall-to-spring and fall-to-fall retention for 9,200 first-time-in-college students who enrolled in a community college over a 4-year period. Their findings highlight the positive impact of developmental education programs and Internet-based courses on student persistence. The separate division for centralized services supports the developmental education programs that are disseminated virtually. The separate division would provide virtual academic advising or coaches who provide learning coaching on how to succeed in an online course.

Tinto (1993) stated that dropping out of college is a longitudinal process of interactions between the individual, the academic and social systems of the college during which the person's experiences in those systems continually cause him/her to modify his/her goal and institutional commitments in ways that lead to persistence or to

varying forms of dropout. The separate division for centralized services supports retention by creating an online community capable of developing localized courses to provide for the learning needs of various groups such as underrepresented minorities, LGBT students, and disabled students. This separate division is the link between the CCC system and the business communities in each region to assure the training received meshes with the needs of the job market. The centralized services division would produce video clips and animations to explain complex processes, online quiz designs, field conference calls from guest speakers, host online labs for students and offer support materials to enhance the online classroom experience.

### **Academic Advising**

According to Skulmoski et al. (2007), the purpose of Round 2 is to give panelists the opportunity to expand on their Round 1 responses. In Round 2, panelists share their expert opinions with the researcher as part of the iterative, structured communication that is the Delphi method. The researcher analyzes the data to determine if there is a pattern of consensus building in their responses. In Round 2, panelists received a list of themes generated from Round 1. Academic Advising was noted by one panelist,

Students new to online really need support the first time. It's good to have someone (not their instructor) provide this support. Students will be more receptive and ask for help. In addition to providing the advisors 24/7 during the first online learning course, I suggest also providing it for their second online course, whatever the course may be. If you have limited resources, then scale down the availability of the advisor.

Another panelist stated,

The Academic Advisors would support the development of an online community to help students navigate through their first and mandatory introduction to online learning course in the California Community College System.

Seven themes reached the threshold of consensus in Round 2. The panelists suggested the emerging themes in Round 2 were critical factors in online student retention. During the second round, the panelists were asked to evaluate the emerging themes identified in Round 1 where there was some agreement in their responses but the emerging themes did not reach the threshold for consensus (see Appendix H).

In Round 2, the panelists identified the theme of academic advising, 20 times by 13 of the 18 panelists, or 72% of the experts participating in Round 2. The panelists described a training program to prepare for online classes in the CCC system. In Round 2, panelists outlined how quality interactions between faculty and students impact online student retention. The academic advising concept adopted for an online mode might include seamlessly embedding academic advisors or learning coaches in a course management system; panelists suggested that making them available 24 hours per day, 365 days per year would improve online student retention. The virtual academic advisor or learning coaches could help students through screen sharing and video tools to support students' efforts and advise them on course schedules. The approach would aid in retaining students who might otherwise feel lost or who are overwhelmed in an online course. The emerging theme of providing academic advising as a method of providing ongoing institutional involvement supports both Astin (1984) and Tinto's (1975) seminal work as well as the findings of Crosling et al. (2009).

Astin (1984) hypothesized that the more involved students are with a course or program, the more successful they will be in college. Academic advising is a way to involve online students before they take their first online course. Astin's involvement theory differs from the interaction theory proposed by Tinto (1975). Astin developed the

involvement theory as an outgrowth of empirical research in an attempt to connect practice to outcomes. In this theory, the institution is important because the “effectiveness of any educational practice is directly related to the capacity of that policy or practice to increase involvement” (p. 298). The online student is engaged in an experience as opposed to taking a course, which increases his/her involvement with the university. Research by Astin served to reinforce the importance of student contact or involvement in contributing to a range of student outcomes, not the least of which was student retention.

In the seminal work by Tinto (1975) that built upon the previous influential work of Spady (1970), a framework was developed for an explanatory model of the student persistence and the withdrawal process. Tinto postulated that students who integrate socially into the campus community increase their commitment to the institution and are more likely to graduate. The academic advising model begins the process of socialization for online students in the CCC system.

A review of retention research by Crosling et al. (2009) determined that the teaching techniques and methods in an institution represent the critical factor affecting retention. The authors contended that a dynamic interplay exists among student engagement, the quality of student learning and the approach used for teaching. In other words, academic advising is an effective means to increase student involvement. An examination of retention research by Fincher (2010) discovered adult student retention differs from traditional retention much like traditional students differ from adult students. Fincher (2010) stated that a reason for this difficulty is that student college preparation was insufficient and “some institutions currently deal with poor preparation by allowing

students to sink or swim on their own”. As the majority of student body growth comes from adult students, adult student retention management will become critical to the majority of colleges and universities (Fincher, 2010).

### **Unexpected Findings**

An unexpected finding was the lack of consensus concerning specific methods to develop a student success culture in the CCC system. According to Tinto (1975), students who integrate socially into the campus community increase their commitment to the institution and are more likely to graduate. A critical factor to both campus and online student retention is the relationship between the student and the culture of the campus or online experience. The panelists were asked to evaluate the idea of creating a student success culture at the CCCs using student success stories, offering teaching awards for the best online instructors and dissemination of reports from the Chancellor’s office on the graduate rates from online courses, showcasing students who have transferred successfully to 4-year institutions. Only three of the 18 panelists or 16.67% of the experts had a positive view of this concept.

The type of student attracted by the effort and the understanding of the mission of the CCC system was not discussed. The mission of the California Community Colleges and their online retention strategy should be in alignment overall.

There are substantial differences in the retention rates of students based upon ethnicity. Although approximately 57% of all full time bachelors’ students graduate within 6 years, only approximately 37% of African-American and Native American students graduate within 6 years. The California Community College system is increasing the education for the underserved and underrepresented including individuals



with disabilities and those with basic skills needs. Additional unexpected findings included the lack of discussion about the impact of ethnicity and low socio-economic conditions on student success upon those underserved and underrepresented communities. An unexpected finding was the absence of linking the nature of students who seek out online education and the effect on online student retention in the CCC.

Electronic learning (e-learning) has become widely accepted in both entirely online learning environments and in blended learning contexts (Mayadas, Bourne, Bascich, 2009). The panelists made no distinction in the nuances of the types of online learning occurring at the CCCs. Adult students have been reported to have lower retention rates in campus programs than traditionally aged students, which has implications for distance education programs since enrollment in these programs is predominantly adult students, particularly at the graduate level (Rovai, 2003). The panelists did not describe the students in the online programs in the CCCs.

The panelists made no comparison between the retention practices needed for the online and classroom based learning occurring at the CCCs. Adult students have been reported to have lower retention rates in campus programs than traditionally aged students. The panelists did not describe or compare the process of how adult student retention differs from traditional retention much like traditional students differ from adult students.

### **Conclusions**

Panelists were asked to offer expert opinions concerning institutional best practices for online student retention. The panelists asserted that the area with the greatest impact over the long term for online student retention within the CCC system

was to establish a separate division for centralized services. This theme was identified confidently over the three Delphi rounds. In Round 2, the theme of a centralized services division emerged as critical to the success in online student retention in CCCs. In Round 3, this best practice was chosen both to have the greatest impact for online student retention and as the most influential theme on online student retention over the long term. The panelists established consensus concerning the use of a centralized services division. Although there was no agreement on the best way to implement this best practice, the CCC system is executing similar initiatives that might affect online student retention. The conclusion among the panelists was that the centralized division could continue to develop resources that schools and faculty can use to improve student readiness, retention and success in online classes.

The specific problem investigated by the study was poor online student retention in the CCC system. The balanced view of the panelists recognized that there were multiple methods and approaches to benefit student success. Community colleges should share information with each other about good practices in online teaching, retention and support. One conclusion among the panelists was to share success stories about how to implement cultural changes that enable better success and greater retention in online education. Schein (1968) reveals the concept of a psychological contract. This contract is a set of expectations that match and is important if efforts to improve motivation in an organization like a school are likely to be effective. The combination of best practices and cultural change would sustain improvement in online student retention in the long term.

The open-ended questions in Round 1 were designed to generate the most honest, unbiased opinions possible. The first open ended question posed was: what are the institutional practices that influence student retention in fully online programs in the CCC system? This survey question was designed to provide insight to the first research question of this study, what are the current institutional practices that affect online student retention at CCCs?

The data gathered in Round 1 also related to the secondary research question for this study: what are the primary concerns related to the prioritized institutional practices that influence student retention in fully online programs in the CCC system? As outlined in Chapter IV, the Delphi inquiry culminated in three emerging themes related to online student retention practices: lack of training for faculty, lack of online student support and changing technology requirements and needs. These emerging themes answer the first two research questions of this study and are linked with the area identified with the greatest impact over the long term for online student retention within the CCC system: to establish a separate division for centralized services.

The concern expressed as changing technology requirements and needs answers research question three which asked: what are recommended future institutional practices and policies to improve online student retention at CCCs? The findings led to the conclusion that the centralized virtual community for the CCC system, the implementation of teacher training and academic advising or student support requirements could improve online student retention. The findings further suggest that each of the practices could contribute to higher online student retention rates.

## **Implications for Action**

An implication of the findings for action in the CCC system is to create a culture focused on student success. An effective higher education culture requires and enables innovation in an appropriate context. Colleges share best practices in online teaching and support. This is only part of the story. Cultural change begins when there is a bifurcation in the contextual story and colleges publish best practices in online teaching and support along with how to effect cultural changes that enable better success and retention in online education.

Students should be advised very early in the education process by counselors on how to succeed before they begin an online course. Additionally, the CCC system should ensure as many of the professors of online courses as possible are full-time, improve their skills and have worked extensively in their field before teaching the subject matter.

The CCC system should provide opportunities and incentives for teachers to receive specific training through the centralized services division or encourage them to pursue degrees in higher education such as: Masters of Education in Instructional Design. The professors should build their own courses in a clear way that is easy for students to follow and should include a user friendly experience. The CCC system should also promote online students' awareness of success stories and give awards for excellence in course design. The approach should support reporting data for online student retention as a factor in the evaluation of every professor and educate professionals to identify students that are at risk of dropping out. All professors must be trained to execute course design and teach face-to-face, blended delivery or online courses in the same manner. The execution of an online course should share similarities like office hours with both

face-to-face and blended modes of course delivery. The best practices in each area of course delivery can be shared to improve quality of student experience and retention.

The CCC system should establish positions for academic advising or learning coaches to promote a sense of community. Academic advisors are a method of online student support that might bring about a sense of community, albeit a virtual one. The idea of a learning coach is one way to get students talking with each other in an online class, asking for help and interacting about the course. The CCC system should use a step-by-step approach to build an online community. Academic advisors can offer students a variety of insights to help them address educational, personal, social and career decisions. Personal management skills are essential for success in developing and maintaining success in the online classroom, in a career and in relationships.

### **Recommendations for Further Research**

In discussing gaps in the research regarding online student retention, Allen and Seaman (2006) proposed that the type of student that is drawn to online programs, a non-traditional student, tends to be older and often holds additional employment and family responsibilities as compared to the more traditional campus based student. The panelists in this study suggested that students taking online programs at the CCC system are non-traditional students but seek traditional support methods like academic advising consistently afforded to their campus-based peers. Because the findings suggest that online students have a more traditional mindset, additional research is warranted to identify the most effective delivery of traditional support methods in a virtual world. The research should focus on identifying the specific components of the traditional student support system that can be incorporated into a virtual support system. The research

should also use student sampling to gain insight concerning the student perspectives of the components they would value in a virtual support system.

There are different structures within the Delphi method. Additional insight into online student retention would be gained by incorporating a mixed methodology into the Delphi design. A Delphi mixed method study would enhance the results. According to Creswell (2005), a mixed method study is characterized by integrating quantitative and qualitative data collection and analysis in a single study or a program of inquiry. The Delphi technique is flexible and can accommodate a mixed methodology to study large populations in the CCCs.

A larger quantitative study could be conducted to examine the perspectives of online educators in the CCC system concerning retention approaches. An additional study could obtain data concerning student retention strategies from instructors at all of the 112 CCCs. Further insight could be gained by comparing best practices in online student retention in the CCC system with out-of-state models.

The CCC system is turning to technology to help meet the demand for higher education. Online programs help educational institutions reach more students than would be possible with traditional classroom delivery of curriculum (Allen & Seaman, 2008). In order to continue to meet the demand and reach more students, additional research related to building community within the world of instant education is prudent. The research should use quantitative methods to explore students' perceptions concerning their ideal concept of an online campus community. It should also include an assessment of the feasibility of implementing the concepts for an online community identified by students.

Technology is changing rapidly, suggesting that further research should include how support services are best delivered using PC, Apple, and mobile phone technology. The research should investigate methods for creating a seamless approach to online student support systems that is viable across all modes of technology delivery. The research should use qualitative approaches to review best practices for teacher training, academic advising and centralized service delivery in all modes.

This research component should involve a study to determine how the online and on-campus delivery can be executed homogenously. Original research in this area might discover common characteristics of each course delivery mode. Research efforts might discover what characteristics can be shared in the execution of courses online and on-campus classrooms to make the experience in either mode feel similar.

Specific research is needed to determine the best approach to educate underserved, underrepresented individuals including those with disabilities and various ethnic groups. Research about the level of achievement in students from low socio-economic communities would be insightful. The research should include a review and discussion about the impact of ethnicity on student success and upon those among the underserved, underrepresented communities. Research describing students in online courses as compared to campus classes might provide insight on the retention rates of the specific student categories. Research efforts might include the impact upon student retention of an older student population with greater family obligations and job responsibilities.

Research to determine the best way to align the student retention with the CCC Mission. The CCC Mission is a multi-step strategy. The further research determines how the online student retention strategy supports the CCC Mission strategy effectively.

### **Concluding Remarks and Reflections**

This Delphi study investigated and identified best practices to improve student retention in online programs offered in the CCC system. A group of panelists shared their expert opinions and made final recommendations regarding the factors influencing online student retention in the CCCs.

Panelists described ways to improve online student retention in the CCC system that were related specifically to online faculty training, establishing a separate division for centralized services and academic advising or learning coaches available 24 hours a day in the virtual setting. The recommendations outlined provide a foundation for best practices for online student retention in the CCC system. The panelists' concerns and recommendations are related to Tinto's (1993) assertions regarding the sense of being connected to a community and the effect of academic connectedness on online student retention in an academic institution.

The findings have identified the types of programs that can improve retention of online students. The next step is to identify the best way to support online students in the CCC system using traditional methods in a non-traditional, virtual environment. It is also necessary to determine and refine the best practices to establish uniform student retention practices for use in both the online and on-campus environment to improve retention rates in the CCC system while keeping pace with technological change.



## REFERENCES

- ACT. (2011). *National collegiate retention and persistence to degree rates*. Retrieved from <http://www.act.org/research/policymakers/pdf/retain%5F2011.pdf>
- Aigbavboa, C., & Thwala, W. (2012, July). *An exploration of the use of Delphi methodology in housing satisfaction studies*. Paper presented at the 4th West Africa Built Environment Research (WABER) Conference, Abuja, Nigeria. Retrieved from <https://ujdigispace.uj.ac.za/bitstream/handle/10210/8911/Aigbavboa%20Clinton%20CO.pdf?sequence=1>
- Ali, R., & Leeds, E. (2009). The impact of face-to-face orientation on online retention: A pilot study. *Online Journal of Distance Learning Administration*, 12(4). Retrieved from <http://www.editlib.org/p/76604/>
- Allen, I. E., & Seaman, J. (2006). *Growing by degrees: Online education in the United States, 2005*. Needham, MA: Sloan Consortium.
- Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. Needham, MA: Sloan Consortium.
- Allen, I. E., & Seaman, J. (2008). *Growing by degrees: Online education in the United States*. Retrieved from [http://sloanconsortium.org/resources/growing\\_by\\_degrees.pdf](http://sloanconsortium.org/resources/growing_by_degrees.pdf)
- Allen, I. E., & Seaman, J. (2010). *Learning on demand: Online education in the United States, 2009*. The Sloan Consortium. Retrieved from <http://www.sloan-c.org/publications/>
- Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States, 2010*. Needham, MA: Sloan Consortium.

- Allen, I. E., & Seaman, J. (2014). *Grade change: Tracking online education in the United States*. Babson Park, MA: Babson Survey Research Group. Retrieved from <http://www.onlinelearningsurvey.com/reports/gradechange.pdf>
- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2009). *Trends in global higher education: Tracking an academic revolution*. Retrieved from [http://atepie.cep.edu.rs/public/Altbach,\\_Reisberg,\\_Rumbley\\_Tracking\\_an\\_Academic\\_Revolution,\\_UNESCO\\_2009.pdf](http://atepie.cep.edu.rs/public/Altbach,_Reisberg,_Rumbley_Tracking_an_Academic_Revolution,_UNESCO_2009.pdf)
- Angelino, L. M., Williams, F. K., & Natvig, D. (2007). Strategies to engage online students and reduce attrition rates. *Journal of Educators Online*, 4(2). Retrieved from <http://files.eric.ed.gov/fulltext/EJ907749.pdf>
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25(4), 297-308.
- Babbie, E. (2013). *The practice of social research*. Belmont CA: Wadsworth.
- Bahr, P. R., Gross, J. L., Slay, K. E., & Christensen, R. D. (2013). First in line: Student registration priority in community colleges. *Educational Policy*. doi:10.1177/0895904813492381
- Bailey, T. R. (2005). *Paths to persistence: An analysis of research on program effectiveness at community colleges*. Retrieved from <https://folio.iupui.edu/handle/10244/268>
- Bailey, T. R., Jenkins, D., & Leinbach, D. T. (2007). The effect of student goals on community college performance measures. *Community College Research Center Brief*, 33, 1-4. Retrieved from <http://ccrc.tc.columbia.edu/our-research.html>

- Baker, R. L. (2002). Evaluating quality and effectiveness: Regional accreditation principles and practices. *Journal of Academic Librarianship*, 28(1/2), 3-7. doi:10.1016/S0099-1333(01)00279-8
- Beatty-Guenter, P. (2003). Studying distance education at community colleges. *Journal of Applied Research in the Community College*, 10(2), 119-126. Retrieved from <http://www.montezumapublishing.com/jarcc1/aboutus.aspx>
- Beech, B. (1999). Go the extra mile—use the Delphi technique. *Journal of Nursing Management* 7, 281-288. doi:10.1046/j.1365-2834.1999.00125.x
- Bennett, C., & Monds, K. (2008). Online courses: The real challenge is motivation. *College Teaching Methods and Styles Journal*, 4(6), 1-6. Retrieved from <http://www.cluteinstitute.com/college-teaching-methods-styles-journal-ctms/>
- Berger, J. B., Ramírez, G. B., & Lyons, S. (2005). Past to present. In A. Seidman (Ed.), *College student retention: Formula for student success* (2<sup>nd</sup> ed., pp. 1-31). Lanham, MD: ACE/Praeger.
- Berkner, L., Horn, L., & Clune, M. (2000). *Descriptive summary of 1995-96 beginning postsecondary students: Six years later. Statistical analysis report*. Retrieved from <http://files.eric.ed.gov/fulltext/ED471901.pdf>
- Boberg, A. L., & Morris-Khoo, S. A. (1992). The Delphi method: A review of methodology and an application in the evaluation of a higher education program. *Canadian Journal of Program Evaluation*, 7(1), 27-40. Retrieved from <http://cjpe.ca/cjpe>

- Boston, W., Ice, P., & Gibson, A. (2011). Comprehensive assessment of student retention in online learning environments. *Online Journal of Distance Learning Administration*, 4(1). Retrieved from [http://www.westga.edu/~distance/ojdla/spring141/boston\\_ice\\_gibson141.html](http://www.westga.edu/~distance/ojdla/spring141/boston_ice_gibson141.html)
- Brender, J., Ammenwerth, E., Nykänen, P., & Talmon, J. (2006). A pilot Delphi study. *Methods of Information in Medicine*, 45, 125-136. Retrieved from <http://methods.schattauer.de>
- Brown, R. (2011, July 18). Community-college students perform worse online than face to face. *The Chronicle of Higher Education*. Retrieved from [http://chronicle.com/article/Community-CollegeStudents/128281/?sid=pm&utm\\_source=](http://chronicle.com/article/Community-CollegeStudents/128281/?sid=pm&utm_source=)
- Buckley, C. (1995). Delphi: A methodology for preferences more than predictions. *Library Management*, 16(7), 16-19. doi:10.1108/01435129510093737
- Bureau of Labor Statistics. (2005). *Internal analysis from the bureau of labor statistics monthly labor review*. Washington, DC: Government Printing Office.
- Burkholder, G., Lenio, J., Holland, N., Jobe, R., Seidman, A., Neal, D., & Middlebrook, J. (2013). An institutional approach to developing a culture of student persistence. *Higher Learning Research Communications*, 3(3), 16-39. Retrieved from <http://journals.sfu.ca/liu/index.php/HLRC>
- California Community Colleges Chancellor's Office. (2011). *Distance education report*. Retrieved from [http://californiacommunitycolleges.cccco.edu/Portals/0/reportsTB/DistanceEducation2011\\_final.pdf](http://californiacommunitycolleges.cccco.edu/Portals/0/reportsTB/DistanceEducation2011_final.pdf)

California Community Colleges Chancellor's Office. (2013a). *Distance education report*.

Retrieved from <http://californiacommunitycolleges.cccco.edu>

[/Portals/0/reportsTB/REPORT\\_DistanceEducation2013\\_090313.pdf](http://californiacommunitycolleges.cccco.edu/Portals/0/reportsTB/REPORT_DistanceEducation2013_090313.pdf)

California Community Colleges Chancellor's Office. (2013b). *Key facts about California*

*community colleges*. Retrieved from [http://californiacommunitycolleges](http://californiacommunitycolleges.cccco.edu/PolicyInAction/KeyFacts.aspx)

[.cccoco.edu/PolicyInAction/KeyFacts.aspx](http://californiacommunitycolleges.cccco.edu/PolicyInAction/KeyFacts.aspx)

California Community Colleges Chancellor's Office (2013c). *Periodic report of distance*

*education*. Retrieved from <http://extranet.cccco.edu/Portals/1>

[/ExecutiveOffice/Board/2013\\_agendas/september/REPORT\\_DISTANCE\\_ED\\_08](http://extranet.cccco.edu/Portals/1/ExecutiveOffice/Board/2013_agendas/september/REPORT_DISTANCE_ED_08)

[2813\\_FINAL.pdf](http://extranet.cccco.edu/Portals/1/ExecutiveOffice/Board/2013_agendas/september/REPORT_DISTANCE_ED_08)

California Community Colleges Chancellor's Office. (2013d). *Scorecard: An*

*accountability framework for the California community colleges*. Retrieved from

[http://extranet.cccco.edu/Portals/1/TRIS/Research/Accountability/ARCC2\\_0/Final](http://extranet.cccco.edu/Portals/1/TRIS/Research/Accountability/ARCC2_0/Final)

[1%20ARCC%20Scorecard%20Framework.pdf](http://extranet.cccco.edu/Portals/1/TRIS/Research/Accountability/ARCC2_0/Final)

California Community Colleges Chancellor's Office. (2013e). *Student success initiative,*

*final report*. Retrieved from <http://www.californiacommunitycolleges.cccco.edu>

[/PolicyInAction/StudentSuccessInitiative.aspx](http://www.californiacommunitycolleges.cccco.edu)

California State Postsecondary Education Commission. (2007). *California higher*

*education accountability: Goal—Student success measure: California community*

*students' degrees and certificates awarded and successful transfers*. Retrieved

from <http://www.cpec.ca.gov/completereports/2007reports/07-06.pdf>

- Callan, P. M. (2009). *California higher education, the master plan, and the erosion of college opportunity (National Center Report# 09-1)*. Retrieved from [http://www.highereducation.org/reports/ssc/ssc\\_about\\_highered.pdf](http://www.highereducation.org/reports/ssc/ssc_about_highered.pdf)
- Carr, S. (2000). As distance education comes of age, the challenge is keeping the students. *The Chronicle of Higher Education*, 46(23), A39-A41.
- Casey, D. M. (2008). The historical development of distance education through technology. *TechTrends*, 52(2), 45-51. doi:10.1007/s11528-008-0135-z
- Chambers, T. E. (2002). *Internet course student achievement: In Ohio's two-year community and technical colleges, are online courses less effective than traditional courses (Doctoral dissertation)?* Retrieved from ProQuest Dissertations & Theses. (UMI No. 3079264)
- Christensen, C. M., Horn, M. B., Caldera, L., & Soares, L. (2011). Disrupting college: How disruptive innovation can deliver quality and affordability to postsecondary education. Retrieved from <http://www.americanprogress.org/issues/labor/report/2011/02/08/9034/disrupting-college/>
- Clayton, M. J. (1997). Delphi: A technique to harness expert opinion for critical decision-making tasks in education. *Educational Psychology*, 17(4), 373-386. doi:10.1080/0144341970170401
- Coates, J. F. (1975). In defense of Delphi: A review of Delphi assessment, expert opinion, forecasting, and group process by H. Sackman. *Technological Forecasting and Social Change*, 7(2), 193-194. doi:10.1016/0040-1625(75)90058-X

- Cohen, A. M., & Brawer, F. B. (2003). *The American community college*. New York, NY: John Wiley & Sons.
- Cook, C., Brismée, J. M., & Sizer, P. S., Jr. (2006). Subjective and objective descriptors of clinical lumbar spine instability: A Delphi study. *Manual Therapy, 11*(1), 11-21. doi:10.1016/j.math.2005.01.002
- Coons, A. G., Browne, A. D., Campion, H. A., Dumke, G. S., Holy, T. C., McHenry, D. E., & Sexton, K. (1960). *A master plan for higher education in California 1960-1975*. Retrieved from [http://www.cpec.ca.gov/completereports/externaldocuments/master\\_plan.pdf](http://www.cpec.ca.gov/completereports/externaldocuments/master_plan.pdf)
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.) Upper Saddle River, NJ: Pearson.
- Crosling, G., Heagney, M., & Thomas, L. (2009). Improving student retention in higher education: Improving teaching and learning. *The Australian Universities' Review, 51*(2), 9-18.
- Cuhls, K. (2003). *Delphi method*. Karlsruhe, Germany: Fraunhofer Institute for Systems and Innovation Research.
- Custer, R. L., Scarcella, J. A., & Stewart, B. R. (1999). The modified Delphi technique-A rotational modification. *Journal of Vocational and Technical Education, 15*(2), 1-10. Retrieved from <http://scholar.lib.vt.edu/ejournals/JVTE/>
- Dabbagh, N., & NannaRitland, B. (2005). *Online learning: Concepts, strategies and application*. Upper Saddle River, NJ: Prentice Hall.

- Delbecq, A. L., Van de Ven, A. H., & Gustafson, D. H. (1975). *Group techniques for program planning: A guide to nominal group and Delphi processes*. Glenview, IL: Scott, Foresman.
- DiRamio, D., & Wolverton, M. (2006). Integrating learning communities and distance education: Possibility or pipedream? *Innovative Higher Education*, 31(2), 99-113. doi:10.1007/s10755-006-9011-y
- Dobbs, R. R., Waid, C. A., & del Carmen, A. (2009). Students' perceptions of online courses. *Quarterly Review of Distance Education*, 10(1), 9-26. Retrieved from <http://www.infoagepub.com/quarterly-review-of-distance-education.html>
- Douglass, J. A. (2007). *The California idea and American higher education: 1850 to the 1960 master plan*. Stanford CA: Stanford University Press.
- Dowd, A., & Mara, E. (2013, April 30). Evaluating the California community college system's student success scorecard. *Huffington Post*. Retrieved from [http://www.huffingtonpost.com/estela-mara-bensimon/student-success-scorecard\\_b\\_3186342.html](http://www.huffingtonpost.com/estela-mara-bensimon/student-success-scorecard_b_3186342.html)
- Fike, D. S., & Fike, R. (2008). Predictors of first-year student retention in the community college. *Community College Review*, 36(2), 68-88. doi:10.1177/0091552108320222
- Fincher, M. (2010). Adult student retention: A practical approach to retention improvement through learning enhancement. *The Journal of Continuing Higher Education*, 58(1), 12-18.



- Geist, M. R. (2010). Using the Delphi method to engage stakeholders: A comparison of two studies. *Evaluation and Program Planning*, 33(2), 147-154. doi:10.1016/j.evalprogplan.2009.06.006
- Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *Review of Educational Research*, 80(3), 437-469. doi:10.3102/0034654310370163
- Goodman, C. M. (1987). The Delphi technique: A critique. *Journal of Advanced Nursing*, 12(6), 729-734. doi:10.1111/j.1365-2648.1987.tb01376.x
- Goodwin, P., & Wright, G. (2010). The limits of forecasting methods in anticipating rare events. *Technological Forecasting and Social Change*, 77(3), 355-368. doi:10.1016/j.techfore.2009.10.008
- Gordon, T. J. (1994). The Delphi method: AC/UNU millennium project *Futures Research Methodology*, 2. Retrieved from [http://www.gerenciamento.ufba.br/Downloads/delphi%20\(1\).pdf](http://www.gerenciamento.ufba.br/Downloads/delphi%20(1).pdf)
- Hadsell, J. A. (2012). *The online instructional dynamic: a study of community college faculty teaching online courses and their perceptions of barriers to student success* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3535955)
- Hagedorn, L. S. (2005). *How to define retention: A new look at an old problem*. Retrieved from <http://files.eric.ed.gov/fulltext/ED493674.pdf>
- Hall, B. (2000). New study seeks to benchmark enterprises with world-class eLearning in place. *E-learning*, 1(1), 18-29.

- Hannay, M., & Newvine, T. (2006, March). Perceptions of distance learning: A comparison of online and traditional learning. *Journal of Online Learning and Teaching*, 2(1). Retrieved from [http://jolt.merlot.org/vol6no2/keengwe\\_0610.htm](http://jolt.merlot.org/vol6no2/keengwe_0610.htm)
- Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, 32(4), 1008-1015. doi:10.1046/j.1365-2648.2000.t01-1-01567.x
- Haydarov, R., Moxley, V., & Anderson, D. (2012). Counting chickens before they are hatched: An examination of student retention, graduation, attrition, and dropout measurement validity in an online master's environment. *Journal of College Student Retention: Research, Theory and Practice*, 14(4), 429-449. doi:10.2190/CS.14.4.a
- Hecker, D. (2005). Employment outlook 2004-2014. *Monthly Labor Review*, 70-101. Retrieved from <http://www.bls.gov/opub/mlr/2005/11/art1full.pdf>
- Henschke, J. A. (1998, September). *Historical antecedents shaping conceptions of andragogy: A comparison of sources and roots*. Paper presented at the International Conference on Research in Comparative Andragogy, Radovljica, Slovenia.
- Hignite, K. (2011). Going the distance: Part 1 of 2. *Business Officer*, 44(7), 30-31. Retrieved from [http://www.nacubo.org/Business\\_Officer\\_Magazine.html](http://www.nacubo.org/Business_Officer_Magazine.html)
- Holmberg, B., Bernath, H., & Busch, F. W. (2005). *The evolution, principles and practices of distance education (Vol. 11)*. Retrieved from [http://www.unioldenburg.de/fileadmin/user\\_upload/c31/master/mde/download/asfvolume11\\_eBook.pdf](http://www.unioldenburg.de/fileadmin/user_upload/c31/master/mde/download/asfvolume11_eBook.pdf)

- Horn, L., Peter, K., & Rooney, K. (2002). *Profile of undergraduates in US postsecondary institutions: 1999-2000. Statistical analysis report*. Retrieved from <http://nces.ed.gov/pubs2002/2002168.pdf>
- Hossler, D. (2005, November). *Managing student retention: Is the glass half full, half empty, or simply empty?* Paper presented at the Strategic Enrollment Management Conference of the American Association of Collegiate Registrars and Admissions Officers, Chicago, IL.
- Howell, S. L., Laws, R. D., & Lindsay, N. K. (2004). Reevaluating course completion in distance education. *Quarterly Review of Distance Education*, 5(4), 243-252. Retrieved from <http://www.infoagepub.com/quarterly-review-of-distance-education.html>
- Hsu, C., & Sandford, B. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research, and Evaluation*, 12(10), 1-8. Retrieved from <http://pareonline.net>
- Jackson, N. M. (2013). First in line: Priority registration for freshmen retention: Changing the rules on which students register for classes First. *University Business*, 16(8). Retrieved from <http://www.questia.com/magazine/1G1-339918847/first-in-line-priority-registration-for-freshmen>
- Jaggars, S., & Bailey, T. R. (2010). *Effectiveness of fully online courses for college students: Response to a Department of Education meta-analysis*. Retrieved from <http://academiccommons.columbia.edu/item/ac:172120>

- Jahng, N., Krug, D., & Zhang, Z. (2007). Student achievement in online distance education compared to face-to-face education. *European Journal of Open, Distance and E-Learning*, 1(19). Retrieved from <http://www.eurodl.org/index.php?p=archives&year=2007&halfyear=1&article=253>
- Jenkins, D. (2006). *What community college policies and practices are effective in promoting student success? A study of high-and low-impact institutions*. Retrieved from <http://ccrc.tc.columbia.edu/publications/community-college-management-practices.html>
- Jenkins, R. (2011, May 22). Why are so many students still failing online? *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/Why-Are-So-Many-Students-Still/127584/>
- Johnson, H. (2010). *Higher education in California*. Sacramento, CA: Public Policy Institute of CA.
- Johnson, L., Adams, S., Cummins, M., Estrada, V., Freeman, A., & Ludgate, H. (2013). *The NMC horizon report: 2013 higher education edition*. Retrieved from <http://www.nmc.org/pdf/2013-horizon-report-HE.pdf>
- Karoly, L. A., & Panis, C. W. (2004). *The 21st century at work: Forces shaping the future workforce and workplace in the United States (Vol. 164)*. Santa Monica CA: Rand Corporation.
- Kaynak, E., & Macauley, J. A. (1984). The Delphi technique in the measurement of tourism market potential: the case of Nova Scotia. *Tourism Management*, 5(2), 87-101. doi:10.1016/0261-5177(84)90056-6

- Keeney, S., Hasson, F., & McKenna, H. (2006). Consulting the oracle: ten lessons from using the Delphi technique in nursing research. *Journal of Advanced Nursing*, 53(2), 205-212. doi:10.1111/j.1365-2648.2006.03716.x
- Kim, K., & Bonk, C. J. (2006). The future of online teaching and learning in higher education: The survey says. *Educause Quarterly*, 29(4), 22-30. Retrieved from <http://www.educause.edu/node/634>
- Knowles, M., Holton, E., & Swanson, R. A. (2005). *The adult learner* (6<sup>th</sup> ed.). New York, NY: Butterworth-Heinemann.
- Kolowich, S. (2013, August 8). The MOOC revolution may not be as disruptive as some had imagined. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/MOOCs-May-Not-Be-So-Disruptive/140965/>
- Kurubacak, G. (2007). Identifying research priorities and needs in mobile learning technologies for distance education: A Delphi study. *International Journal of Teaching and Learning in Higher Education*, 19(3), 216-227. Retrieved from <http://www.isetl.org/ijtlhe/>
- LaPadula, M. (2003). A comprehensive look at online student support services for distance learners. *The American Journal of Distance Education*, 17(2), 119-128. doi:10.1207/S15389286AJDE1702\_4
- Lincoln, Y. S. (1985). *Naturalistic inquiry* (Vol. 75). Thousand Oaks, CA: Sage.
- Linstone, H. A., & Turoff, M. (Eds.). (1975). *The Delphi method: Techniques and applications*. London, UK: Addison-Wesley.
- Linstone, H. A., & Turoff, M. (2002). *The Delphi method: Techniques and applications*. Retrieved from <http://is.njit.edu/pubs/delphibook/>

- Little Hoover Commission. (2012). *Serving students, serving California: Updating the California Community Colleges to meet evolving demands*. Sacramento, CA: Milton Marks Commission on California State Government Organization and Economy.
- Liu, S., Gomez, J., Khan, B., & Yen, C. J. (2007). Toward a learner-oriented community college online course dropout framework.
- Liu, S. Y., Gomez, J., & Yen, C. (2009). Community college online course retention and final grade: Predictability of social presence. *Journal of Interactive Online Learning*, 8(2), 165-182.
- Long, B. T., & Kurlaender, M. (2009). Do community colleges provide a viable pathway to a baccalaureate degree?. *Educational Evaluation and Policy Analysis*, 31(1), 30-53. doi:10.3102/0162373708327756
- Loughlin, K. G., & Moore, L. F. (1979). Using Delphi to achieve congruent objectives and activities in a pediatrics department. *Academic Medicine*, 54(2), 101-106. doi:10.1097/00001888-197902000-00006
- Mayadas, A. F., Bourne, J., & Bacsich, P. (2009). Online education today. *Science*, 323(5910), 85-89.
- McClenney, K. M., & McClenney, B. N. (2003). *Community college inventory: Focus on student persistence, learning and attainment*. Retrieved from <http://novahealthforce.com/faculty-and-staff/teachingsupport/achievingdream/files/ACultureOfEvidence.pdf>

- McGrath, V. (2009). Reviewing the evidence on how adult students learn: An examination of Knowles' model of andragogy. *Adult Learner: The Irish Journal of Adult and Community Education*, 2009, 99-110. Retrieved from <http://www.aontas.com/pubsandlinks/theadultlearner.html>
- McLoughlin, C. (2002). Learner support in distance and networked learning environments: Ten dimensions for successful design. *Distance Education*, 23(2), 149-162. doi:10.1080/0158791022000009178
- Meeuwisse, M., Severiens, S., & Born, M. (2010). Learning environment, interaction, sense of belonging, and study success in ethnically diverse student groups. *Research in Higher Education*, 51, 528-545. doi:10.1007/s11162-010-9168-1
- Mitchell, V. W. (1991). The Delphi technique: An exposition and application. *Technology Analysis & Strategic Management*, 3(4), 333-358. doi:10.1080/09537329108524065
- Mole, B. (2012, July 27). Experts predict more remote learning, despite concerns about its effects. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/Experts-Predict-More-Remote/133177/>
- Moody, J. (2004). Distance education: Why are the attrition rates so high? *The Quarterly Review of Distance Education*, 5(3), 205-210. Retrieved from <http://www.infoagepub.com/quarterly-review-of-distance-education.html>
- Moore, C., & Shulock, N. (2010). *Divided we fail: Improving completion and closing racial gaps in California's community colleges*. Sacramento, CA: Institute for Higher Education Policy, California State University, Sacramento.

- Moore, C., & Shulock, N. (2014). *From community college to university*. Retrieved from [http://www.ppic.org/content/pubs/report/R\\_314CMR.pdf](http://www.ppic.org/content/pubs/report/R_314CMR.pdf)
- Moore, C., Shulock, N., & Jensen, C. (2009). *Crafting a student-centered transfer process in California: Lessons from other states*. Sacramento, CA: California State University, Sacramento, Institute for Higher Education Leadership & Policy.
- Moore, K., Bartkovich, J., Fetzner, M., & Ison, S. (2003). Success in cyberspace: Student retention in online courses. *Journal of Applied Research in the Community College*, 10(2), 107-118. Retrieved from <http://www.montezumapublishing.com/jarcc1/aboutus.aspx>
- Morris, L. V., & Finnegan, C. L. (2009). Best practices in predicting and encouraging student persistence and achievement online. *Journal of College Student Retention: Research, Theory and Practice*, 10(1), 55-64. doi:10.2190/CS.10.1.e
- Morrow, J., & Ackermann, M. E. (2012). Intention to persist and retention of first-year students: The importance of motivation and sense of belonging. *College Student Journal*, 46(3), 483-491. Retrieved from [http://www.projectinnovation.biz/college\\_student\\_journal](http://www.projectinnovation.biz/college_student_journal)
- Mortenson, T. (2005). Measurements of persistence. In A. Seidman (Ed.) *College student retention: Formula for student success* (pp. 31-60). Westport, CT: Praeger.
- Muse, H. (2003). The Web-based community college student: An examination of factors that lead to success and risk. *The Internet and Higher Education*, 6, 241-261. doi:10.1016/S1096-7516(03)00044-7



- Nash, R. D. (2005). Course completion rates among distance learners: Identifying possible methods to improve retention. *Online Journal of Distance Learning Administration*, 8(4). Retrieved from <http://www.westga.edu/~distance/ojdla/winter84/nash84.htm>
- Newman, F., Couturier, L., & Scurry, J. (2010). *The future of higher education: Rhetoric, reality, and the risks of the market*. New York, NY: John Wiley & Sons.
- Ogilvie, G. M. (2011). *Emerging technologies as a form of student engagement for nontraditional California community college students* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3483947)
- Okoli, C., & Pawlowski, S. D. (2004). The Delphi method as a research tool: an example, design considerations and applications. *Information & Management*, 42(1), 15-29. doi:10.1016/j.im.2003.11.002
- Pagano, U., & Rossi, M. (2009). The crash of the knowledge economy. *Cambridge Journal of Economics*, 33, 665-683. doi:10.1093/cje/bep033
- Palacios, V., Johnson, I., & Leachman, M. (2013). *Recent deep state higher education cuts may harm students and the economy for years to come*. Washington, DC: Center on Budget and Policy Priorities.
- Pantages, T. J., & Creedon, C. F. (1978). Studies of college attrition: 1950-1975. *Review of Educational Research*, 48, 49-101. doi:10.2307/1169909
- Park, V., Cerven, C., Nations, J., & Nielsen, K. (2013, February). What matters for community college success: Assumptions and realities concerning student supports for low-income women. *Policy Report*, (2). Retrieved from [http://pathways.gseis.ucla.edu/publications/201302\\_WhatMattersPR.pdf](http://pathways.gseis.ucla.edu/publications/201302_WhatMattersPR.pdf)

- Pascarella, E. T., & Chapman, D. W. (1983). A multiinstitutional, path analytic validation of Tinto's model of college withdrawal. *American Educational Research Journal*, 20(1), 87-102.
- Pascarella, E. T., Smart, J. C., & Ethington, C. A. (1986). Long-term persistence of two-year college students. *Research in Higher Education*, 24(1), 47-71. doi:10.1007/BF00973742
- Pascarella, E. T., & Terenzini, P. T. (1979). Interaction effects in Spady and Tinto's conceptual models of college attrition. *Sociology of Education*, 52, 197-210. doi:10.2307/2112401
- Patterson, B., & McFadden, C. (2009). Attrition in online and campus degree programs. *Online Journal of Distance Learning Administration*, 12(2). Retrieved from <http://www.westga.edu/~distance/ojdla/summer122/patterson112.html>
- Patton, Q. M. (1997). *Utilization focused evaluation: The new century text* (3rd ed.), London, UK: Sage.
- Phipps, R., & Merisotis, J. (1999). *What's the difference? A review of contemporary research on the effectiveness of distance learning in higher education*. Washington, DC: Institute for Higher Education Policy.
- Powell, C. (2003). The Delphi technique: Myths and realities. *Journal of Advanced Nursing*, 41(4), 376-382. doi:10.1046/j.1365-2648.2003.02537.x
- Pullins, T. (2011). *Predicting the retention of college sophomores: The importance of satisfaction* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (AAT No. 3594993)

- Reason, R. (2009). Student variables that predict retention: Recent research and new developments. *NASPA Journal*, 46(3), 482-501. doi:10.2202/1949-6605.5022
- Reed, D. (2008). *California's future workforce: Will there be enough college graduates?* Retrieved from <http://www.ppic.org/main/publication.asp?i=809>
- Rosenthal, E. J. (1976). Delphi technique. In S. B. Anderson, S. Ball, & R. T. Murphy (Eds.), *Encyclopaedia of educational evaluation* (pp. 121-122). San Francisco, CA: Jossey-Bass.
- Rovai, A. P. (2003). In search of higher persistence rates in distance education online programs. *The Internet and Higher Education*, 6(1), 1-16. doi:10.1016/S1096-7516(02)00158-6
- Rowe, G., & Wright, G. (1999). The Delphi technique as a forecasting tool: Issues and analysis. *International Journal of Forecasting*, 15(4), 353-375. doi:10.1016/S0169-2070(99)00018-7
- Rowe, G., & Wright, G. (2001). Expert opinions in forecasting: the role of the Delphi technique. In J. S. Armstrong (Ed.), *Principles of forecasting* (pp. 125-144). New York, NY: Springer.
- Sadera, W., Robertson, J., Song, L., & Midon, N. (2009). Success in online learning and the role of community. In I. Gibson et al. (Eds.), *Proceedings of society for information technology & teacher education international conference 2009* (pp. 515-518). Chesapeake, VA: AACE. Retrieved from <http://www.editlib.org/p/30647>

- Schein, E. H. (1968). *The individual, the organization, and the career: A conceptual scheme*. MIT.
- Schneider, M., & Yin, L. M. (2011). *The high cost of low graduation rates: How much does dropping out of college really cost?* Retrieved from [http://www.air.org/files/AIR\\_High\\_Cost\\_of\\_Low\\_Graduation\\_Aug2011.pdf](http://www.air.org/files/AIR_High_Cost_of_Low_Graduation_Aug2011.pdf)
- Schroeder, C. C. (2013). Reframing retention strategy: A focus on process. *New Directions For Higher Education*, 161, 39-47. doi:10.1002/he.20044
- Schroeder, R. (2012). Emerging open online distance education environment. *Continuing Higher Education Review*, 76, 90-99. Retrieved from <http://www.upcea.edu/cher>
- Scott, D. (2005). Retention, completion and progression in tertiary education in New Zealand. *Journal of Higher Education Policy and Management*, 27(1), 3-17. doi:10.1080/13600800500045687
- Seidman, A. (Ed.). (2005). *College student retention: Formula for student success*. Westport, CT: Praeger.
- Sikora, A., & Carroll, C. D. (2002). *A profile of participation in distance education: 1999-2000*. Retrieved from <http://nces.ed.gov/pubs2003/2003154.pdf>
- Sileo, J. M., & Sileo, T. W. (2008). Academic dishonesty and online classes: A rural education perspective. *Rural Special Education Quarterly*, 27, 55-60. Retrieved from <http://acres-sped.org/journal>
- Sinha, I. P., Smyth, R. L., & Williamson, P. R. (2011). Using the Delphi technique to determine which outcomes to measure in clinical trials: recommendations for the future based on a systematic review of existing studies. *PLoS Medicine*, 8(1), e1000393. doi:10.1371/journal.pmed.1000393

- Sitzmann, T., Kraiger, K., Stewart, D., & Wisher, R. (2006). The comparative effectiveness of web-based and classroom instruction: A meta-analysis. *Personnel Psychology, 59*(3), 623-664. doi:10.1111/j.1744-6570.2006.00049.x
- Skulmoski, G., Hartman, F., & Krahn, J. (2007). The Delphi method for graduate research. *Journal of Information Technology Education: Research, 6*(1), 1-21. Retrieved from <http://www.informingscience.org/Journals/JITEResearch/Overview>
- Snyder, T. D., & Dillow, S. A. (2013). *Digest of education statistics, 2012 (NCES 2014-015)*. Washington, DC: National Center for Education Statistics.
- Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange, 1*(1), 64-85. doi:10.1007/BF02214313
- Stitt-Gohdes, W. L., & Crews, T. B. (2005). *The Delphi technique: A research strategy for career and technical education*. Retrieved from <http://scholar.lib.vt.edu/ejournals/JCTE/v20n2/stitt.html>
- Summers, M. (2003). ERIC review: Attrition research at community colleges. *Community College Review, 30*(4), 64-74. doi:10.1177/009155210303000404
- Swami, P. (2009, July 14). Obama calls for 5 million more college grads [Web log post]. Retrieved from <http://www.cbsnews.com/news/obama-calls-for-5m-more-college-grads>
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125. doi:10.3102/00346543045001089

- Tinto, V. (1993). Building community. *Liberal Education*, 79(4), 16-21. Retrieved from <https://www.aacu.org/liberaleducation>
- U.S. Department of Education. (2006). *A test of leadership: Charting the future of U.S. higher education*. Retrieved from <https://www2.ed.gov/about/bdscomm/list/hiedfuture/reports/pre-pub-report.pdf>
- Van Der Werf, M., & Sabatier, G. (2009). *The college of 2020: Students*. North Hollywood, CA: Chronicle Research Services.
- Vernon, W. (2009). The Delphi technique: A review. *International Journal of Therapy & Rehabilitation*, 16(2), 69-76. doi:10.12968/ijtr.2009.16.2.38892
- Veugelers, R. (2010). Toward a multipolar science world: trends and impact. *Scientometrics*, 82, 439-456. doi:10.1007/s11192-009-0045-7
- Waits, T., & Lewis, L. (2003). *Distance education at degree-granting postsecondary institutions: 2000-2001*. Washington, DC: National Center for Education Statistics, U.S. Department of Education, Institute of Education Sciences.
- Waitsman, M. C. (2012). *Dispositional resilience and person-environment fit as predictors of college student retention*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3512412)
- Waller, L., & Tietjen-Smith, T. (2009). A national study of community college retention rates segmented by institutional degree of urbanization. *Academic Leadership*, 7(1), 1-3. Retrieved from <http://contentcat.fhsu.edu/cdm/landingpage/collection/p15732coll4>

- Walleri, R. D. (1981). Student retention and attrition in the community college: A review and research design. Retrieved from <http://knowledgecenter.completionbydesign.org/sites/default/files/294%20Waller%202009.pdf>
- Weggen, C. C., & Urdan, T. A. (2000). *Corporate e-learning: Exploring a new frontier*. Retrieved from [http://cclp.mior.ca/Reference%20Shelf/PDF\\_OISE/Corporate%20e-learning.pdf](http://cclp.mior.ca/Reference%20Shelf/PDF_OISE/Corporate%20e-learning.pdf)
- Wild, L., & Ebbers, L. (2002). Rethinking student retention in community colleges. *Community College Journal of Research & Practice*, 26(6), 503-519. doi:10.1080/2776770290041864
- Willging, P. A., & Johnson, S. D. (2009). Factors that influence students' decision to dropout of online courses. *Journal of Asynchronous Learning Networks*, 13(3), 115-127. Retrieved from <http://olj.onlinelearningconsortium.org>
- Wilmer, E. (2009). The influence of learning communities on the interaction levels of developmental English students. *Inquiry*, 14(1), 55-67. Retrieved from <http://www.tandfonline.com/loi/sinq20>
- Wolf-Wendel, L., Ward, K., & Kinzie, J. (2009). A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understand college success. *Journal of College Student Development*, 50(4), 407-428. doi:10.1353/csd.0.0077
- Wright, S. W. (2000). *Community colleges*. Washington, DC: CQ Press.

Zachry Rutschow, E., Richburg-Hayes, L., Brock, T., Orr, G., Cerna, O., & Cullinan, D.

(2011). *Turning the tide: Five years of achieving the dream in community*

*colleges*. Retrieved from <http://papers.ssrn.com/sol3>

[/papers.cfm?abstract\\_id=2031257](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2031257)

Zhao, Y., Lei, J., Yan, B., Lai, C., & Tan, S. (2005). What makes the difference? A

practical analysis of research on the effectiveness of distance education. *The*

*Teachers College Record*, 107(8), 1836-1884.



## APPENDIX A: LETTER OF INTRODUCTION AND INFORMED CONSENT FORM

### LETTER OF INTRODUCTION

Dear Ms. Torres,

My name is Felix A. Kalinski, Jr. I am a doctoral candidate in the School of Education at Brandman University. As part of the completion of my Doctorate in Education, I am in the process of completing a study in online student retention and I would like to invite you to participate. The work is titled: Transforming Student Retention in Higher Education Online Programs in California Community Colleges: A Delphi Study. This research effort will explore online retention practices in higher education in California Community Colleges using a three-round modified Delphi approach. Ultimately, the goal of the study is to develop consensus among the Delphi panel of experts for effective future retention practices in online programs in the California Community College system. Your participation is critical because research shows technology-enhanced education can lead to superior learning outcomes, however, online course retention rates in community colleges are low.

A Delphi study relies on a panel of experts to share the ideas and experience in a confidential environment. Your participation in this study will consist of completing the first phase or the Pilot study only. The primary purpose of the Pilot Study is to enhance the validity and reliability of the survey instrument being used in this modified Delphi study. Please take the survey and, in the process, please review the survey instrument. This will permit you to provide timely feedback on the content and format of the survey items. The estimated time for completion is no more than 30 minutes and your effort would be appreciated greatly. This is your total commitment to the study. Your responses will be kept confidential. As the researcher, I will be the only individual with access to the data. The requested turnaround time for your response is one week.

If you have any questions concerning this study, please feel free to contact me via email at [kali4101@mail.brandman.edu](mailto:kali4101@mail.brandman.edu) or via cell phone, 714-770-9670. At the conclusion of this study, I will be glad to share the results with you.

Thank you for sharing your professional time, dedication, and insight.

Yours respectfully,  
*Felix A. Kalinski, Jr.*  
Felix A. Kalinski, Jr.  
Doctoral Candidate, Brandman University

## INFORMED CONSENT FORM

### Informed Consent

**INFORMATION ABOUT:** Transforming Student Retention in Higher Education Online Programs in California Community Colleges: A Delphi Study

**RESPONSIBLE RESEARCHER:** Felix A. Kalinski, Jr.

**PURPOSE OF STUDY:** The purpose of this qualitative Delphi study is to identify the best practices and methods to improve student retention in online programs offered in the California Community College system.

By participating in this study, you agree to do the following: Participate in a Delphi study that consists of completing three separate online surveys that last approximately 20 minutes each. This Delphi survey instrument consists of three rounds of questionnaires that respondents answer consecutively.

I understand that: There are no possible risks associated with study participation. Compensation will not be provided for participation. I may refuse to participate or withdraw from the survey at any time without any negative consequences. Any information that is obtained in this study will remain completely confidential. Study data will be analyzed as a whole and not by individual participant. If the study design or use of the data is to be changed, you will be so informed and consent re-obtained. My participation in this study indicates my agreement to participate. There is no need to sign and return this document to the researcher.

If you have any questions concerning this research, please contact me via email at: [kali4101@mail.brandman.edu](mailto:kali4101@mail.brandman.edu) or by phone at 714-770-9670. You may also contact my chairperson: Dr. Carlos Guzman, [cguzman@brandman.edu](mailto:cguzman@brandman.edu) or the Vice Chancellor of Academic Affairs: Dr. Charles Bullock, [cbullock@brandman.edu](mailto:cbullock@brandman.edu).

I acknowledge that I have received a copy of this form and the Research Participant's Bill of Rights.

I have read the above and understand it and hereby consent to the procedures set forth.

## APPENDIX B: PILOT STUDY SURVEY

### **Welcome to the Student Retention Survey. Thank you for your time.**

Thank you for participating in this survey regarding student retention in online programs at California Community Colleges. Your feedback is important and confidential. The purpose of this study is to discover techniques to transform retention rates for students in online courses compared to face-to-face courses in the higher education programs at California Community Colleges using a Delphi method. I appreciate your time and look forward to sharing the results of this study with you in about two months.

*The Letter of Intent for this study describes the purpose of the Delphi method which is to develop consensus among a panel of experts in order to identify the best practices in the future retention efforts in online programs in higher education within the California Community College System.*

*A Delphi design relies on expert panelists to share their experiences and opinions in order to explore issues.*

*In order to begin the process, would you please answer the following background questions?*

*\*1. What is your current title?*

- Chief Academic Officer*
- Academic Affairs*
- Provost*
- Dean*
- Faculty Manager*
- Admissions or Enrollment*
- Operations*
- Program Director*
- Vice President Online and Blended*
- Campus President*

*Please enter your own title, if it does not appear above.*

*\*2. How many years have you been working in the California Community College System?*

- 5 years or Less*
- 5 to 10 years*
- 10 to 15 years*
- 15 to 20 years*
- 20 Years or more*

*\*3. Are you responsible for working with online programs?*

- Yes*
- No*

*\*4. How many years of experience have you been working with online programs?*

- 5 years or less*
- 5 to 10 years*
- 10 to 15 years*
- 15 to 20 years*
- 20 years or more*

*\*5. Are you responsible for student retention in online programs in the California Community College System?*

- Yes*
- No*

The initial questions should be open-ended in order to generate the most honest, non-biased opinions as possible. Please comment on the questions outlined below. These questions are meant to begin the first Delphi round in this study by Felix A. Kalinski,

Jr. Please comment on the appropriateness of the questions or if you have suggestions on how to revise one or both questions, please provide your suggestions.

\*6. What institutional practices that influence student retention in fully online programs in the California Community College System that should be a priority in this study?

\*7. What are the primary concerns related to the prioritized institutional practices that influence student retention in fully online programs in the California Community College System?

\*8. What practices are commonly used in the California Community College System that affect online student retention?

\*9. Which practices do you think are most successful for retaining online student retention?

\*10. What are the practices used in the California Community College System that are of greatest concern for retention of online students?

\*11. How can these concerns regarding the practices used in the California Community College System be addressed?

\*12. How can existing online retention practices in the California Community College System be improved?

\*13. What new practices could improve retention of online students in the California Community College System?

\*14. Please state the top five issues that improve student retention in the California Community College System?

\*15. What is the biggest threat to improving student retention in the California Community College System?

\*16. If you could only implement one method to improve online student retention in the California Community College, what is the best strategy?

\*17. Would you comment on the appropriateness of these questions given the nature of this study?

\*18. What are your suggestions on how to revise any of these questions to improve the quality of this study?

# RSVP for Online Student Retention Survey

Respectfully Request Your Participation

## Please Consider Sharing Your Expertise

My name is Felix A. Kalinski, Jr. I am a doctoral candidate in the School of Education at Brandman University. As part of the completion of my Doctorate in Education, I am in the process of completing a study in online student retention and I would like to invite you to participate. The work is titled: Transforming Student Retention in Higher Education Online Programs in California Community Colleges: A Delphi Study. This research effort will explore online retention practices in higher education in California Community Colleges using a three-round modified Delphi approach. Ultimately, the goal of the study is to develop consensus among the Delphi panel of experts for effective future retention practices in online programs in the California Community College system. Your participation is critical because research shows technology-enhanced education can lead to superior learning outcomes, however, online course retention rates are low. The purpose of the study is to discover techniques to transform retention rates for students in online courses compared to face-to-face courses in the higher education programs at California Community Colleges using a Delphi method. I appreciate your time and look forward to sharing the results of this study with you at the conclusion of the effort. Your total time commitment will be approximately 30 minutes spread over a three week period. Round 1 of this Delphi study will arrive in your preferred email address on Monday, 1/26/2015. Ultimately, I will share the results of the study with you and look forward in earnest to your participation.

If you are willing to participate in this study, please reply to this email and I will add you to the list of expert panelists for my Delphi study.

With best wishes for great success in 2015, I am

*Felix*

Felix A. Kalinski, Jr

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## APPENDIX D: LETTER OF INTENT ROUND 1 SURVEY

Dear Mr. Jones,

My name is Felix A. Kalinski, Jr. I am a doctoral candidate in the School of Education at Brandman University. As part of the completion of my Doctorate in Education, I am in the process of completing a study in online student retention and I would like to invite you to participate. The work is titled: Transforming Student Retention in Higher Education Online Programs in California Community Colleges: A Delphi Study. This research effort will explore online retention practices in higher education in California Community Colleges using a three-round modified Delphi approach. Ultimately, the goal of the study is to develop consensus among the Delphi panel of experts for effective future retention practices in online programs in the California Community College system. Your participation is critical because research shows technology-enhanced education can lead to superior learning outcomes, however, online course retention rates in community colleges are low.

A Delphi study relies on a panel of experts to share the ideas and experience in a confidential environment. Your participation in this study will consist of completing three rounds of brief survey questions online via the secure and confidential website, Survey Monkey. In each round, you will be asked for your expert opinion. Your responses will be kept confidential. As the research, I will be the only individual with access to the data.

This notification relates to the first round of questions and they are ready for your completion. The requested turnaround time for each round is one week. I will analyze the data within a one-week turnaround time, re-submit information to Survey Monkey and you will receive notification Round 2 is ready for you. Your time commitment for Round 2 is also one week. Finally, you will be notified when Round 3 is available. You will be asked to round three within one week as well. Your total time for this commitment will be three weeks, however, the process may take a total of five to seven weeks. This accounts for the time it takes to analyze and respond back to you.



The population of this Delphi study is a panel of 27 experts from the higher education online field in California Community Colleges. Confidentiality and anonymity are guaranteed throughout this process. Each completed survey will be coded so that anonymity is respected. Any confidential information will be stored in the password protected software package called Survey Monkey in a locked office and I am the only person who will have access to the data. This data will be kept for a minimum of three years, after which, it will be deleted from the hard drive.

You have the potential opportunity to shape policies and procedures within educational institutions that offer fully online programs that may not only positively affect online student retention, but may also influence overall educational quality.

If you have any questions concerning this study, please feel free to contact me via email at [kali4101@mail.brandman.edu](mailto:kali4101@mail.brandman.edu) or via cell phone, 714-770-9670. At the conclusion of this study, I will be glad to share the results with you.

Thank you for sharing your professional time, dedication, and insight.

Yours respectfully,

*Felix A. Kalinski, Jr.*

Felix A. Kalinski, Jr.  
Doctoral Candidate, Brandman University

## APPENDIX E: ROUND 1 SURVEY

### **Delphi Study Round 1 – Student Retention**

**Welcome to the Student Retention Survey. Thank you for your time.**

Thank you for participating in this survey regarding student retention in online programs at California Community Colleges. Your feedback is important and confidential. The purpose of this study is to discover techniques to transform retention rates for students in online courses compared to face-to-face courses in the higher education programs at California Community Colleges using a Delphi method. I appreciate your time and look forward to sharing the results of this study with you.

*The Letter of Intent for this study describes the purpose of the Delphi method which is to develop consensus among a panel of experts in order to identify the best practices in the future retention efforts in online programs in higher education within the California Community College System.*

*A Delphi design relies on expert panelists to share their experiences and opinions in order to explore issues.*

*In order to begin the process, would you please answer the following background questions?*

*\*1. I understand and hereby agree with the informed consent attachment to my initial email.*

- Yes
- No

*\*2. What is your current title?*

- Chief Academic Officer
- Academic Affairs
- Provost
- Dean
- Faculty Manager

- Admissions or Enrollment
- Operations
- Program Director
- Vice President Online and Blended
- Campus President

*Please enter your own title, if it does not appear above.*

*\*3. How many years have you been working in the California Community College System?*

- 5 years or Less
- 5 to 10 years
- 10 to 15 years
- 15 to 20 years
- 20 Years or more

*\*4. Are you responsible for working with online programs?*

- Yes
- No

*\*5. How many years of experience have you been working with online programs?*

- 5 years or less
- 5 to 10 years
- 10 to 15 years
- 15 to 20 years
- 20 years or more

\*6. Are you responsible for student retention in online programs in the California Community College System?

- o Yes
  
- o No

The final set of questions should be open-ended in order to generate the most honest, non-biased opinions as possible. These questions are meant to begin the first Delphi round in this study by Felix A. Kalinski, Jr.

\*7. What institutional practices that influence student retention in fully online programs in the California Community College System that should be a priority in this study?

\*8. What are the primary concerns related to the prioritized institutional practices that influence student retention in fully online programs in the California Community College System?

\*9. What practices are commonly used in the California Community College System that affect online student retention?

\*10. Which practices do you think are most successful for retaining online student retention?

\*11. What are the practices used in the California Community College System that are of greatest concern for retention of online students?

\*12. How can these concerns regarding the practices used in the California Community College System be addressed?

\*13. How can existing online retention practices in the California Community College System be improved?

\*14. What new practices could improve retention of online students in the California Community College System?

\*15. Please state the top five issues that improve student retention in the California Community College System?

\*16. What is the biggest threat to improving student retention in the California Community College System?

\*17. If you could only implement one method to improve online student retention in the California Community College, what is the best strategy?

\*18. Would you comment on the appropriateness of these questions given the nature of this study?

\*19. What are your suggestions on how to revise any of these questions to improve the quality of this study?

APPENDIX F: ROUND 2 SURVEY

**Online Programs in California Community Colleges**

**Welcome to Round 2 of the Student Retention Survey. Thank you for your time...**

The purpose of Round 2 is to explore the responses from Round 1 where there was some agreement. It is in Round 2 where your responses permit consensus to begin forming. If possible, please complete Round 2 by February 16. I will analyze the data and submit the final survey, Round 3, to you on February 23.

**1. Could you describe how the California Community College System could establish Faculty Academies for training in online course development, course delivery, and effective faculty student relationship with various student population segments that are aligned with Student Learning Outcomes?**

**2. What do you think of the concept of deploying a number of Academic Advisors that serve as Learning Coaches for online students' real time during the workday? The Academic Advisors would function as a virtual concierge on the computer available 24 hours per day to answer questions. They would also support the development of an online community to help students navigate through their first and mandatory introduction to online learning course in the California Community College System. Please comment:**

**3. What is the impact of a large number of part-time instructors in the California Community College System on the quality of online teaching?**

**4. How could online student's best be surveyed after Week 1 in their online class to gather data about their anxieties and challenges about the class?**

**5. Why is a centralized Student Success Tracking System or Learning Management System important to both Faculty and Students in the Online Programs of the California Community College System also critical to online student retention?**

**6. What alternative compensation practices could be used to attract talented, devoted and intrinsically motivated Faculty who are good at what they do and care about their students and colleagues?**

**7. What do you think would happen to retention if all students were offered counseling using existing technology such as Skype or physical counseling before taking an online course combined with a preview of the course along with its requirements and assessments to determine if the student will succeed in the course?**

**8. How would the use of online tutoring prior to and throughout the course benefit student retention?**

**9. How can the funding of Community Colleges in California and the relationship with the state be managed to provide some autonomy so that needed courses can always be offered?**

**10. What is the best way to create a culture within the California Community College System that values online teaching and the importance of online student enrollment?**

**11. Would you explain how to best create an Online School as a separate division or separate school within the California Community College System that would provide centralized services, improve online student retention and support best practices for student retention in traditional classes as well?**



## APPENDIX G: ROUND 3 SURVEY

### **Online Programs in California Community Colleges**

**Welcome to Round 3 of the Student Retention Survey. Thank you for your time...**

The purpose of Round 3 is to explore the emerging responses from the previous rounds where there was agreement. It is to confirm these responses and to show the perspective of the panelists. Please complete Round 3 by March 2. I will analyze the data and complete the study shortly thereafter. As promised, I will make sure you receive a complimentary copy of this study upon completion. Thank you for your thoughtful participation.

**1. As a group of Panelists, these are the five areas you chose with the greatest impact on Online Student Retention within the California Community College System, they are:**

- a. Academic Advisors that serve as Learning Coaches during the day and that could function as a virtual concierge on the computer 24 hours per day.**
- b. Survey students at the end of week 1.**
- c. Offer counseling using existing technology like Skype and include a preview of the course along with its requirements and assessments.**
- d. Creating a culture at the California Community Colleges using student success stories, recognition of best online teaching awards for online instructors, disseminate reports from the Chancellor's office on the graduate rates from online courses with a showcase of those students who have transferred successfully to four year institutions.**
- e. Setup a separate online school or utilize the Online Education Initiative or other entity as a way to provide centralized services to the California Community College (CCC) System without competing with the CCC.**

**Which item would have the greatest impact?**

- Choice a would have the greatest impact
- Choice b would have the greatest impact
- Choice c would have the greatest impact
- Choice d would have the greatest impact
- Choice e would have the greatest impact

### **Online Programs in California Community Colleges**

**1. As a group of Panelists, these are the five areas you chose with the greatest impact on Online Student Retention within the California Community College System, they are:**

- a. Academic Advisors that serve as Learning Coaches during the day and that could function as a virtual concierge on the computer 24 hours per day.**
- b. Survey students at the end of week 1.**
- c. Offer counseling using existing technology like Skype and include a preview of the course along with its requirements and assessments.**

**d. Creating a culture at the California Community Colleges using student success stories, recognition of best online teaching awards for online instructors, disseminate reports from the Chancellor's office on the graduate rates from online courses with a showcase of those students who have transferred successfully to four year institutions.**

**e. Setup a separate online school or utilize the Online Education Initiative or other entity as a way to provide centralized services to the California Community College (CCC) System without competing with the CCC.**

**Which item would have the greatest impact?**

- Choice a would have the least impact
  
- Choice b would have the least impact
  
- Choice c would have the least impact
  
- Choice d would have the least impact
  
- Choice e would have the least impact

## **Online Programs in California Community Colleges**

**1. As a group of Panelists, these are the five areas you chose with the greatest impact on Online Student Retention within the California Community College System, they are:**

**a. Academic Advisors that serve as Learning Coaches during the day and that could function as a virtual concierge on the computer 24 hours per day.**

**b. Survey students at the end of week 1.**

**c. Offer counseling using existing technology like Skype and include a preview of the course along with its requirements and assessments.**

**d. Creating a culture at the California Community Colleges using student success stories, recognition of best online teaching awards for online instructors, disseminate reports from the Chancellor's office on the graduate rates from online courses with a showcase of those students who have transferred successfully to four year institutions.**

**e. Setup a separate online school or utilize the Online Education Initiative or other entity as a way to provide centralized services to the California Community College (CCC) System without competing with the CCC.**

**Which area outlined above would have the most influence over the long term on online student retention?**

- Choice a would have the most influence in the long term
  
- Choice b would have the most influence in the long term
  
- Choice c would have the most influence in the long term

- Choice d would have the most influence in the long term
- Choice e would have the most influence in the long term

**Online Programs in California Community Colleges**

**1. As a group of Panelists, these are the five areas you chose with the greatest impact on Online Student Retention within the California Community College System, they are:**

- a. Academic Advisors that serve as Learning Coaches during the day and that could function as a virtual concierge on the computer 24 hours per day.**
- b. Survey students at the end of week 1.**
- c. Offer counseling using existing technology like Skype and include a preview of the course along with its requirements and assessments.**
- d. Creating a culture at the California Community Colleges using student success stories, recognition of best online teaching awards for online instructors, disseminate reports from the Chancellor’s office on the graduate rates from online courses with a showcase of those students who have transferred successfully to four year institutions.**
- e. Setup a separate online school or utilize the Online Education Initiative or other entity as a way to provide centralized services to the California Community College (CCC) System without competing with the CCC.**

**As it relates to the area with the influence with which you most agree, what is your recommendation related to the area for the future of that area and how it will continue to change the institutional practices to improve student retention in online programs in California Community Colleges?**