At Issue: Online Education and the New Community College Student

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Community colleges are facing a demographic shift in their student bodies with significant consequences for how they can utilize instructional innovations such as online education. On the one hand, community colleges are educating an increasing number of adult learners, with a set of psychological, academic, and personal characteristics that make this population likely to benefit from the flexibilities provided in the online environment. At the same time, community colleges are also now educating a growing number of younger and academically at-risk students in need of remediation and greater academic structure than today's online classes may be able to deliver. Community colleges utilizing online education will need to take into account the distinct needs of these two growing populations in order to maximize student learning in the online environment.

Since their origins in the late 19th century, community colleges have pursued the mission of finding a way to deliver a quality education and its concomitant social and economic benefits to a diverse population. Community colleges are accustomed to adaptation and change, as they have continuously struggled to find ways to deliver an education to a diverse student population while facing the constraints of limited resources (Cohen, 2003; Kevin J. Dougherty & Townsend, 2006; Vaughan, 2006). Community colleges are now facing a new wave of change in the form of demographic evolution and technological innovation that demand new adaptations.

An increasingly diverse student body is entering the community college system, bringing new challenges for community colleges with respect to their ability to serve this population. On the one hand, community colleges are increasingly serving an older nontraditional student population, adults with considerable work experience who are returning to college to advance their education

and develop their skills set to help them succeed in the new economy. At the same time, community colleges are also serving a younger, academically at-risk student population with very different academic and psychological characteristics than their older counterparts and with a distinct need for developmental education. This demographic shift has the potential to present community colleges with serious challenges as they seek to utilize instructional innovations such as online education to expand their capacity to serve a growing and changing community college student body.

Diversity and the mission of community colleges

Community colleges have long pursued the mission of making higher education available to the poor and working class of America. Since their inception during the late 19th and early 20th century, community colleges have been charged with the mission of delivering an education, and its associated social, political, and economic benefits, to a broad array of the population (Cohen, 2003; Kevin J. Dougherty & Townsend, 2006; Vaughan, 2006). Community colleges have historically functioned as pathways by which Americans could pursue economic opportunity and social mobility through acquiring a higher education (Bailey, 2006; Franco, 2002). While higher education traditionally functioned as a luxury product focused on providing the higher class with a traditional liberal education, community colleges helped transform both the availability and purpose of higher education, moving higher education toward more practical programs of instruction that could be applied immediately in the job market to help individuals attain higher-paying jobs that could help them rise up the socioeconomic ladder (Dougherty, 1994).

While community colleges have always been involved in the task of making higher education available to the poor and working class, the specific characteristics of these populations have changed over the years. During their earliest years in the post-Civil War era, the community colleges (then termed "junior colleges") focused their efforts on educating America's working class to fill the nation's need for a more technically educated workforce necessary to perform the jobs of an increasingly industrialized economy (Brint & Karabel, 1989). With the mass influx of eastern and southern European immigrants during the Progressive Era, the community colleges began to play a major role in educating immigrants, providing them with a pathway for economic mobility and acculturating them into the American way of life. African Americans, women, and other minorities found a home in the community colleges throughout the 20th century, as social, political, and economic circumstances often prevented these minority groups from attending traditional four-year colleges (Cohen, 2003; Quigley & Bailey, 2003). The community colleges have also played an important role in educating veterans, starting with their role in providing access to education for the masses of American soldiers returning home after World War II (Beach, 2012).

The growth of the adult student population

In recent years, there has been considerable growth in the adult community college student population. As a result of changing economic conditions, students over the typical 18-21 college student age range have increasingly enrolled in or returned to college in large numbers as they seek out new skills and qualifications to prepare them for the jobs of the new economy or to help them advance within their current lines of work (Kantrowitz, 2010). As of fall 2011, the average community college student was 28 years old and 60% of community college students across the United States were over the age of 21 (American Association of Community Colleges, 2013a). From the 2007-2008 to 2010-2011 school years, the number of two-year degrees from public institutions awarded to adult learners increased by 22%, compared with 17% for traditional age students (Dunbar, Hossler, & Shapiro, 2011). Indeed, the growth in the adult learner population has been profound over the last decade, prompting some to even reconsider the use of the term "nontraditional student" in their descriptions of this population. Adult learners have become part of the "new normal" at colleges across America and especially at community colleges, bringing with them a unique set of needs and perspectives that will shape the way community colleges deliver instruction and administer their academic programs (Soares, 2013).

The nature of adult student learning. Adult students have distinctive psychological characteristics related to how they learn that require a specific style of instruction on the part of community college faculty. The idea that adult students are substantially different from younger learners and require a systematically different form of instruction was advanced in the United States by Malcolm Knowles, an American professor who became famous for advancing the theory of andragogy. The term andragogy relates to the idea that there is a distinct set of theories, concepts, and practices, different from those utilized in teaching younger students, that should be used when educating adult learners (Malcolm Shepherd Knowles, 1980). At the core of Knowles's theory is the idea that adults are more independent in their psychological makeup, personalities, and thought processes than their younger counterparts, leading to important differences in how adults should optimally be taught. For instance, adults tend to be more independent and self-reliant when it comes to learning and solving problems. Research also suggests that adult learners are more intrinsically motivated than their younger counterparts, driven to learn by factors closely related to their individual lives, such as the desire to improve their self-esteem through learning new skills (Malcolm S. Knowles, Holton, & Swanson, 2012). Adult students also have more life experiences and are much more likely to have well-developed worldviews and opinions (Kolb, 1984). All these characteristics suggest that this new growing population of adult learners may benefit from a style of teaching and design of academic programs where independence and flexibility is put at the forefront and where previous work and life experience is recognized and utilized throughout the learning process. Academic work may be more experimental, designed in partnership with the adult learner, and not as closely guided as it may be with traditional age students.

Adult students face a different social context. It is also important for community college faculty and administrators to recognize that adult students live and work within a different social context than younger students, with implications for their needs as college students and the potential barriers they may face in their pursuit of academic success. Adult learners typically have a variety of life responsibilities that compete for their time and may affect their ability to academically succeed. Jobs and careers often take up the bulk of the adult student's daily time and effort, leading to difficulties in managing work, family, and academic responsibilities (Compton & Schock, 2000). Dependent children and/or adult family members needing care place further demands and constraints upon the adult student (Markowitz & Russell, 2006). Adult learners often have busy schedules and, ". . . may have limited time or need for traditional types of involvement in campus culture" (Ross-Gordon, 2003). Adult students typically place their academic responsibilities as one factor within the context of their larger set of social responsibilities, while younger students facing fewer demands and time constraints may be freer to make academic responsibilities a greater priority (Levine, 1993).

Indeed, adult learners are a distinct category of students with specific social and psychological characteristics and needs that will require recognition and adaptation on the part of community colleges. Instructional innovations such as online learning can go a long way toward addressing the adult learner's needs and preferences for a more flexible and individually tailored form of education, making a college education a more practical reality and helping them overcome the scheduling barriers they may face in their pursuit of higher education. In many ways, online instruction is tailor-made for the needs of the adult student population, allowing for, and even prompting, all of the aforementioned instructional and programmatic practices. However, changes and innovations in online instruction at the community college level will also have to address the needs of a similarly growing student population of younger academically at-risk students with very different characteristics and needs.

The growth in younger learners needing developmental education

While community colleges currently educate a growing adult student population, they also continue to be an important source of access to higher education for younger traditional age students. Across the nation, community colleges educate approximately half of the national undergraduate student body, with approximately 40% of these students being 21 years old or younger (American Association of Community Colleges, 2013a, 2013b). Many are also minority and of low income economic status; community colleges now provide access to nearly half of all minority undergraduate students and more than 40% of undergraduate students living in poverty (Mullin, 2012).

It is an unfortunate reality that a substantial portion of this younger population of students can also be categorized as academically at-risk and in need of

remedial or developmental education. The growth in remedial students comes as result of problems in the K–12 educational system. For the past several decades, our elected officials and policymakers have heralded the importance of an education and have pushed K–12 public school systems to improve their organizational performance. Starting with President Bill Clinton's Goals 2000 program, the federal government has been active in pushing public school systems to improve various indicators of their performance, especially their high school graduation rates (Mishel & Roy, 2006; National Research Council, 2011). Both President George W. Bush and President Barack Obama continued with this approach, utilizing the federally based financial incentives to prompt states to focus on improving their graduation rates (Ravitch, 2011). And to a considerable degree, these efforts have succeeded. The graduation rate for the class of 2010 stood at nearly 75 percent, an improvement of about 8% over the previous decade, nearing the historical high of 77.1% (EPE Research Center, 2013).

While improved high school graduation rates are a positive development driving college enrollment rates, many of these graduates and new college students are graduating high school with considerable deficiencies in their reading, writing, and mathematics abilities. While an increasing number of students have graduated high school, many of them have not reached the levels of proficiency in these areas that are necessary for college-level academic work (Vaughan, 2006). Approximately 60% of high school graduates enter community college requiring some form of remedial education, with some students requiring multiple semesters of remedial instruction (Jaggars, Hodara, & Stacey, 2013). Community colleges, as the provider of education for so many of these students, must find ways to work with these students and ensure that they reach the necessary levels of proficiency in these areas while simultaneously educating them in their specific chosen disciplines.

Clearly, we must recognize that this growing pool of younger students with needs for remedial education have different characteristics from the aforementioned pool of adult learners, requiring a concomitantly different approach with regards to their education. In contrast to adult learners who have often developed a sense of self-efficacy due to their life and work experiences, students in need of developmental education generally recognize their academic deficiencies and therefore are less confident about their ability to succeed in college. Many developmental learners are poor minority students and their status as remedial students can add to a sense of stigmatization they may be experiencing in college; they may experience serious academic challenges upon enrollment yet resist seeking help out of fear about others' negative perceptions about them (Deil-Amen, 2011). They may need and benefit from closer academic guidance and instruction in the classroom while adult learners may benefit from and express a preference for more independent and experiential forms of learning. Younger students in need of remedial education may also face different barriers to academic success than their older counterparts. For instance, while work and family commitments act as primary barriers to the achievement of adult learners, this younger population of developmental learners may find factors such as basic

deficits in their reading, writing, and studying skills to be their primary barriers to achievement.

Implications for online education at community colleges

The reality of this demographic influx leaves community colleges in something of a bind when it comes to utilizing instructional innovations such as online education. The community college population has been rising across the nation, placing stresses on the ability of these organizations to meet the public demand for a higher education. If utilized properly, online education can bring efficiencies to community colleges, allowing them to teach more students with fewer resources (Meyer, 2006). The plausible temptation for community colleges operating under fiscal constraint is to place as many classes and programs into partially or fully online formats to benefit from the capital and labor efficiencies made possible by online technologies.

However, recent research raises questions about the ability of online education to realize these efficiencies in all contexts. While a 2010 meta-analysis sponsored by the U.S. Department of Education suggested that college student outcomes in online classes were generally as good as, and sometimes better, than face-to-face classes, subsequent studies have qualified this assertion, finding that the effectiveness of online education may vary depending on the type of students taking these classes (Allen & Seaman, 2011). An analysis by the Community College Research Center at Columbia University argued that the U.S. Department of Education report examined classes that were taken by relatively well-prepared university students, limiting the applicability of its findings, especially to the traditionally underserved population (Allen & Seaman, 2011; Jaggars, 2010). Subsequent studies have found that online education may indeed have negative effects on community college students, especially males, younger students, Black students, and students with lower grade point averages (D. Xu & Jaggars, 2013; D. Xu, 2013). Thus, the economies of scale that are theoretically possible through the broad implementation of online education become qualified by the differing characteristics, academic needs, and programmatic demands of an increasingly diverse student population.

While innovations such as online education can help community colleges realize a multiplier effect in their educative efforts, potentially leading to new organizational efficiencies, this instructional innovation must be tailored to meet the needs of a diverse student body to help ensure that short-term economic efficiencies are not negated by longer-term problems with the quality and effectiveness of a community college education. Following are some proposals for future policy experimentation that can help community colleges more fully realize the advantages of online education.

Carefully consider the types of classes offered online. Succeeding in implementing online education at the community college level may to a large degree depend on faculty and administrative prudence regarding the types of classes that are of-

fered online, particularly since different types of classes tend to be populated by different types of students. For instance, remedial and introductory level courses are often populated with greater numbers of younger remedial students who may not be able to succeed in these courses when delivered in the online format. A recent partnership between San Jose State University and Udacity, a private online education provider, aimed at offering a host of introductory level classes, including entry-level math, college algebra, and elementary statistics, in online format to remedial college students and high school students from disadvantaged backgrounds was recently disbanded and deemed by most to be a failed experiment; while most students completed the courses, only a small portion passed (Kolowich, 2013). Other research has shown that when applied to community college students, online education can have a negative impact on course retention and course performance in introductory math and English courses when compared with face-to-face classes (J. Di Xu, 2011). There is growing evidence that while online education may be an effective strategy for delivering courses to relatively well-prepared students and adult students accustomed to learning and working independently, it may have negative impacts on younger and academically at-risk community college students. A simple rule may be for community college faculty and administrators to experiment with placing more advanced courses populated by better prepared adult students online while treading carefully when considering placing introductory and remedial level courses in an online format. Many of the longer term efficiencies community colleges can garner from online education may come more from placing advanced and upper-level courses online for adult students who need this flexibility.

Consider the potential role of hybrid instruction for aiding developmental learners. It is also important to consider that the decision to run traditional face-to-face or online classes is not necessarily mutually exclusive; a variety of hybrid models exist that can help community colleges and their students benefit from some of the conveniences, flexibilities, and cost efficiencies of online instruction while preserving some of the essential elements and advantages of the traditional face-to-face learning experience. The aforementioned 2010 U.S. Department of Education study meta-analysis of online education studies found that instruction combining online and face-to-face elements outperformed both face-to-face and fully online learning (Means, SRI International Center for Technology in Learning, & U.S. Department of Education Policy and Program Studies Service, 2010). Some scholars note that blended learning systems have the potential to allow instructors to improve their teaching practices and offer students increased access to information and scheduling flexibilities while aiding their institutions in pursuing cost effectiveness (Bonk & Graham, 2012). Community colleges should strongly consider experimenting with hybrid models that may better fit the needs of diverse community college learners.

Maximize the value of student advisement services. While choosing to enroll in an online versus a face-to-face class appears to be an important decision warranting careful student consideration, it is likely that many community college students remain relatively unaware of the importance of this decision and its potential

impact on their chances of academic success. The online student experience itself, regardless of the subject matter at hand, is substantially different from face-to-face instruction with implications for student achievement. Issues such as encountering technical difficulties, the potential for student isolation, and the relative lack of structure in online classes are factors that can hinder student success in the online format (Jaggars, 2012). While community colleges generally cannot compel students to take face-to-face nor online versions of classes, they do have opportunities to influence student choices through student advisement and other support services. Through their mentoring of students in academic matters, student advisors can have a powerful impact on the likelihood of student success and persistence to graduation (Drake, 2011). Community colleges interested in expanding their online options in a way that is most beneficial to students should more fully develop and utilize these resources and ensure that faculty and staff involved in student advisement are aware of issues surrounding online learning, the strengths and weaknesses of this learning modality, and the factors that may impede the likelihood of students succeeding in an online environment (Simpson, 2013).

Recognize the importance of the differences in how online instruction is utilized to deliver instruction to the diverse community college student population. While online learning has steadily grown in utilization over the past decade, it is still to a great degree an experimental educational practice. Despite the fact that online education has existed in some form for about two decades, there are still competing views with regards to how online learning should be conducted and these views have changed as computer technology has changed. Various questions are still in play and community college faculty and administrators interested in expanding online education at their campuses need to remain abreast of these continuing debates. For instance, what types of online learning management systems should a community college use? While there are some predominant suppliers of online learning management software, there are a variety of new proprietary as well as open source software packages entering the market, each with potential strengths and weaknesses for different types of students. Are community college faculty and administrators aware of the nuances of these ongoing debates and how they may impact their students? There are also controversies as to whether synchronous or asynchronous forms of instruction ("real time" online instruction versus allowing students to log in to class websites and learn when is most convenient for them) provide a better learning experience. How does this debate impact today's growingly diverse community college student body? And do other factors, such as online class structure and website complexity, contribute to how well different community college students learn and perform in the classroom? In short, faculty and administrators charged with developing online classes and programs need to recognize that online education is not a static nor a monolithic phenomenon; it is characterized by a diversity of technological tools, approaches, and practices suited to meet the needs of different types of learners. Keeping abreast of current developments in online educational approaches needs to be

an integral part of the jobs of faculty and administrators involved in online learning if they wish to succeed in expanding this innovation at their institutions.

Conclusion

Community colleges are once again being called on to face a new wave of change. Like the rest of our society, community colleges are being impacted by the technological revolution that is shaping our society's preferences with regard to how all kinds of goods and services are delivered. But simultaneously, our community colleges are also being impacted by a demographic shift that must shape how community colleges utilize technology to meet those changing student preferences. An increasingly diverse population is entering America's community colleges with differing academic needs, and it will be the job of community college faculty and administrators to find ways to ensure that this new student body has access to a high-quality and modern education. Online technologies, if utilized properly, can help community colleges meet the changing needs and expectations of today's evolving community college student body while bringing a host of efficiencies and economies to their campuses. But the proper utilization and implementation of online programs is not something that will occur automatically; it will require careful thought, the utilization of research, and a spirit of experimentation on the part of faculty members, administrators, and community college students alike for this experiment in educational innovation to succeed.

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