ONLINE
COLLEGES

THE COMMUNITY COLLEGE CRISIS:

USING INTERNET TECHNOLOGY TO REACH HIGHER RETENTION AND GRADUATION RATES

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EXECUTIVE SUMMARY:

COMMUNITY COLLEGES ARE FAILING

American community colleges have reached a crisis point. Though President Obama has argued that "community colleges are an essential part of our [economic] recovery—and our prosperity in the future," graduation rates at community colleges are at a low, continuing a trend first identified by the U.S. Department of Education in a lengthy study conducted from 2004-2007, which revealed that only 28% of community college students completed a two-year degree in three years. At the White House Summit on Community Colleges in October, Education Secretary Arne Duncan reported that only one in four community college students (25%) earns a degree or certificate, or successfully transfers to universities for their baccalaureate degrees. This is in contrast to the figures for students who start at four-year colleges, which have a graduation rate of over 60%.

This disturbing development has been seized upon by the federal government as a problem that needs rectification. When President Barack Obama visited Macomb Community College in Michigan in 2009, he said, "Community colleges are an undervalued asset in our country. Not only is that not right - it's not smart." He proceeded to announce a plan to invest in the nation's community colleges that would have modernized facilities and created the Community College Challenge Fund to, among other things, partner businesses with community colleges, improve remedial education to help incoming students transition to college-level work, and increase the technological capabilities of community colleges by introducing more online work. The first attempt at this plan, the American Graduation Initiative, was scuttled due to budgetary concerns in 2010, but the U.S. Department of Education announced on September 26, 2011 a $500 million grant program for the nation's community colleges.

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THE PROBLEM:

LOW GRADUATE RATES, HIGH COSTS TO SOCIETY

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The President's goal is for the United States to produce more college graduates than any other nation by the year 2020. This new initiative means that community colleges, which have faced this daunting decline in graduation and retention rates at a time when more and more students want to expand their education to secure employment, need to think carefully about how to invest their grant allocations to resolve some of these long-standing challenges, and specifically how new technology can address some of the more egregious problems in retention and graduation rates. One way that community colleges can do this is to focus extensively yet carefully on new ways to improve online components of course and degree work. "Online and Hybrid Course Enrollment and Performance in Washington State Community and Technical Colleges," a recent study by researchers at the Community College Research Center at the Teachers College at Columbia University, found that students at community colleges performed worse in their online courses than in traditional face-to-face courses, and that they were also more likely to drop out if they took online courses early in their college careers. They also discovered that "those with the most Web-based credits were the least likely to graduate or transfer to a four-year institution." Given this data, community colleges need to focus not just on increasing technology itself, but on careful measurement and analysis of how that technology is used in order to produce substantial changes in graduation rates.

This White Paper will address how community colleges can improve their retention and graduation rates by effectively utilizing online technologies and programs, by highlighting three specific opportunities that online technology offers community college efforts: Assessment of Skills and Knowledge; Improvement of Skills and Knowledge through Developmental Education; Partnering with Businesses.

I. ASSESSMENT OF SKILLS AND KNOWLEDGE

24%

of high school seniors who take took the ACT test in 2010 meet its college-ready benchmarks in all four core subject areas.

– Bill and Melinda Gates Foundation

Since the institution of the 2002 education reform embodied by the No Child Left Behind Act (NCLB), Pub. L. No. 107-110, 115 Stat. 1425, www.ed.gov/esea which emphasized routine standardized testing for K-12 students, scores have declined as more and more students fail to demonstrate sufficient grade-appropriate proficiencies. According to the Bill and Melinda Gates Foundation, "Only 24 percent of high school seniors who take took the ACT test in 2010 meet its college-ready benchmarks in all four core subject areas." This sad statistic is echoed in the 2010 results of SAT scores among college students, which have fallen to a 40-year low. For low-scoring and underprepared high schools seniors, the open enrollment policies of community colleges usually provides the last chance they have to enroll in a college program—but this also means that community colleges admit a disproportionately high number of students who are not prepared for the level of college work and are more likely to fail or drop out.

Therefore, the first step that community colleges must take to increase rates of graduation and retention, and help reach the President's goal, is to create and utilize better online assessment tools in order to accurately gauge student skills and place them in courses that are appropriate for their skill level, while still maintaining college standards. The availability of effective course management systems and assessment programs can make this process simpler, more cost-effective in an economy of scale, and repeatable with minimum future investment. For example, while many community

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colleges currently use the computerized Wonderlic or Accuplacer tests to assess skills and place students, one test may not be enough to accurately gauge the needs of incoming students. Community colleges should adopt multiple ways to assess student academic needs. As researcher Candace Thille of Carnegie-Mellon suggests, student work can itself be used to assess skill levels: "One unique power of educational technology is its ability to embed assessment into virtually every instructional activity and use the data gathered to create a virtuous cycle for continuous improvement." For example, student online work can be monitored and assessed, as is done in Carnegie Mellon's Open Learning Initiative, in which teams of educational specialists work with the instructor to analyze data on students. This is one way to keep tabs on what students are learning and what they need extra help in. This can help make online learning more effective and interactive.

However, one of the best ways to begin assessment of community college student skill levels is to start before enrollment, while students are still in high school. The CollegeCareer Ready School Diagnostic, for example, is available online through EPIC's College Readiness Performance Assessment System. Unlike the Wonderlic and Accuplacer tests, the School Diagnostic shifts the focus to high school educators and allows them to assesses their programs and determine where they may be failing to meet the needs of students who wish to attend college. Community colleges can collaborate with local high schools to make sure that the students filtering from the high schools into the community colleges will be ready to succeed at college-level work.

One new program to watch is the Massachusetts nonprofit family assistance group Families United in Educational Leadership (FUEL). FUEL arranged for students at Chelsea High School to take the Accuplacer test at Bunker Hill Community College when they were in tenth grade, to identify and assess learning needs before they graduated from high school. FUEL hopes that access to tests such as the Accuplacer will help schools identify educationally at-risk students, which they can then target for additional support.

Online technology can be utilized to expand this program to all high school students. For example, the College Board, which administers the PSAT, SAT, and other exams, started a new initiative in June 2011 to administer an online version of the Accuplacer test to tenth and eleventh graders, and also provided academic assistance to those students through online tutoring and instant feedback through MyFoundationsLab, an online assessment and skills mastery program offered by Pearson Education. While these programs are too new to provide much data on success rates, online assessments would make it unnecessary for students to travel to a physical campus and are therefore more practical for at-risk high school students who wish to enroll in college, such as students in low-income brackets who lack the financial or familial support needed to take time out to travel to a testing location.

II. IMPROVEMENT OF SKILLS AND KNOWLEDGE

Assessment is only the first step in a complex process. Once assessment data is available, community colleges need to offer students a way to raise their skill level through developmental education, also known as remedial education, so that they do not fail out or get discouraged and abandon their college plans. This is nothing new; according to the University of Alabama, two of the top ten reasons why college students fail and/or drop out of college are:

1. Lack of ability and/or poor high school preparation;
2. Poor language skills.

60%

of incoming students are referred to at least one developmental course.

– Community College Research Center

This is important because a study by Thomas Bailey and Sung-Woo Cho for the Community College Research Center indicates that "about 60 percent of incoming students are referred to at least one developmental course." Unfortunately, colleges have not risen to this challenge and the current methods of providing students with remedial attention have clearly fallen short.

Yet some progress has been made in finding solutions to this problem, including the adoption in thirty-four states of the Common Core Standards, which helps standardize and regulate the work that high schools do to prepare students for college. But community colleges have traditionally met the needs of their remedial students by enrolling them in credit-bearing remedial courses, which cost money, time, and often just sends students back into a classroom environment that they may have rejected or been intimidated by in earlier education (which is often the root cause of the low scores and low-skills that prevent them from being college-ready by the time they graduate high school.) Utilizing online courses that pair content with continual assessment can create opportunities for continual feedback, which can keep the student engaged and provide data for faculty about where they need to provide more instruction for struggling students. There are three ways this can be achieved:

A. Improving college readiness before enrollment;
B. Introducing new online instructional models;
C. Building online tutoring and mentoring structures.

A. READINESS BEFORE ENROLLMENT

The Partnership for Assessment of Readiness for College and Careers (PARCC) is a 24-state consortium collaborating on the creation of new K-12 assessments in English and math. Recognizing that in the United States, "over a third of all students [entering college] requiring remedial education upon enrollment in our nation's public two- and four-year institutions of higher education," PARCC urges collaboration with state two- and four-year universities to help with the creation of core standards and the implementation of such instruction at pre-college schools. PARCC encourages college faculty to "review the CCSS to determine what it means to be ready for courses in their institutions, participate in scoring pilot items and field testing, develop scoring rubrics, choose anchor papers, and participate in a robust, research-based process to set the college- and career-ready achievement levels."

Similarly, South Texas College has partnered with all the school districts in its region to create a dual enrollment program in which college instructors work as adjuncts in the

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high schools to provide extra training and schoolwork. Students in the program can earn college credit for this work. But on-site instruction from college professors can be costly, and at-risk students who routinely miss classes will miss out on this opportunity. Expanding the relationship to include online collaborations between high school and college faculty, who can work together to develop relevant readiness programs, directly related to specific career paths or programs of study, may help address the problems of absenteeism that often plague underprepared students, and give those students an opportunity to develop college readiness. Such cross-institution and cross-grade level collaboration between community college faculty and pre-college educators will also assist community colleges to maintain instructional consistency and ensure that students are more prepared when they enroll. This may go far toward resolving the problem of high drop out and low graduation rates at community colleges.

B. NEW ONLINE INSTRUCTIONAL MODELS

Community colleges should also take advantage of new technologies to create meaningful and cost- effective developmental programs to ensure that students will be college ready by the time they enroll in their first credit-bearing course. Bailey and Cho point out that three methods are currently being tested in community colleges across the nation: Accelerated Learning Programs (ALP), Integrated Basic Education and Skills Training (I-BEST) and Learning Communities. Community colleges can use Internet technologies to implement these programs online in either fully online or hybrid courses that all incoming students must pass before enrollment. Community colleges can either develop their own online implementations, partner with state institutions, or contract with private companies for such services.

Conducting such classes online creates the ability to provide these courses in a cost-effective way, because once the course is created, it only needs to be adjusted periodically in order to remain current and account for research on their effectiveness, rather than recreated each time a new professor teaches the course. To be fully effective and encourage broader student participation, community colleges should offer such courses for free to incoming students and require mastery of the course work before they can be admitted to a degree program. This provides students with the opportunity to become college-ready without having to spend money on remedial college courses. The relatively low-cost of internet course development means that the creation of one course can serve thousands with minimal future financial investment.

C. ONLINE TUTORING AND MENTORING

Online tutoring and mentoring can also help remedial students maintain their forward momentum in skills development once they have passed their initial developmental courses. While community colleges offer tutoring on-campus, either by appointment or in drop-in sessions, many community college students have such overburdened schedules that it is not uncommon for the students struggling the most to never see the inside of a learning lab or skills center. Online universities without ground campuses all over, such as the University of Phoenix and Kaplan University, provide fully online tutoring through help desks and by appointment. This helps students who cannot get to campus get the support they need, which will help them stay on course to graduation.

95%
of its students have remained in the STEM disciplines until graduation
– Chronicle of Higher Education

Online mentoring has a proven track record of success that can also help community colleges raise their retention and graduation levels. MentorNet, for example, specializes in providing e-mentoring to students in engineering and science, by pairing students with working members of the professions in fields to which the students aspire. According to a September 2011 article in the *Chronicle of Higher Education*, "95 percent of its students have remained in the STEM disciplines until graduation, and 91 percent are working in their fields three years after graduating." Funding for the mentoring comes from several non-profit foundations, including the Alfred P. Sloan Foundation and the Carnegie Foundation, and colleges and universities that contract Mentornet's services.

Community colleges can adapt this model by transitioning from the traditional in-person advising system into an online mentoring system in which faculty are assigned students who can contact them via e-mail or social networking sites, and in that way retain a more frequent personal connection with a member of the college community who is vested in the success of that student.

III. PARTNERSHIP WITH BUSINESS

Part of President Obama's new community college initiative is to enlist businesses, both for-profit and non-profit, in training community college students in job-specific skills through the "Skills for America's Future" component of the new plan. Community college retention and graduation rates can increase if colleges directly link specific education programs to practical career-based outcomes. Curriculum review at community colleges should include an analysis of both whether the college curriculum provides a pathway toward a baccalaureate degree and whether the college provides effective methods of training for students not suited to extensive academic study, or who wish to engage directly in their chosen fields through internships and other paths to employment directly after earning a degree or certificate from a community college.

25%
of internships posted on one job search site were for virtual internships.
– The Wall Street Journal

While there have been many collaborations between businesses and community colleges, including scholarship programs and other funding endeavors, one method for creating more collaboration between community colleges and businesses is through the creation of more online "virtual" internships, in which college instructors and work site supervisors collaborate to teach students essential job skills. In 2009, *The Wall Street Journal* reported that more than 25% of internships posted on one job search site were for virtual internships. While practices of virtual internships vary depending on the industry, generally speaking, virtual interns work remotely for a business, often never even meeting their supervisors face-to-face, but participating in group tasks, completing individual work projects, and attending meetings through internet formats such as Skype. Such work could be developed as both credit-bearing coursework to help students graduate and as a networking opportunity for students soon to enter the competitive work force. This will benefit both business and industry because they can have access to a wide variety of candidates with different ideas. As one employer said, "There's just no way I would have gotten the same level of talent if I required a physical internship presence." Students can also benefit from the wide range of opportunities available, often in other countries, and in the experience they can have working with colleagues, developing marketable skills, and learning how to manage multiple tasks and information streams.

Stringhub.com is a new platform that may also provide opportunities for successful collaboration between community colleges and businesses. Companies will sign up and offer projects that they need completed, which professors can then assign to their students for course credit. Students then work with the company to complete the project, which is evaluated by the company and the professor. While students do not get paid for such work, they can earn course credit, learn workplace skills, and make connections with people currently working in different industries.

CONCLUSION

Community colleges are facing a crisis of higher drop-out rates and lower graduation rates. On September 8, 2011, President Obama announced plans to replace the American Graduation Initiative with a $5 billion dollar addition to the jobs bill he has submitted to Congress, specifically to fund the repair and modernization of the nation's community colleges. But such external improvements in facilities will be meaningless if attention is not paid to the need for academic improvement among community college students. Online technologies can be one way to reform and improve current community college approaches to the problems of underprepared students and academic failure, through more accurate Assessment, more focus on the Improvement of basic skills before enrollment, and Partnership with business and industry to provide students with both real-world training and the incentive to complete their degrees.