



College by Subscription

By Burck Smith

Many students taking remedial courses in college are not doing well in them. A better approach is needed that will benefit not only students, but also taxpayers and the students who are footing the bill for unsuccessful instruction. A subscription-based model in which students can work at their own pace and get help from readily available faculty could improve outcomes and reduce costs.

About one-third of all incoming college students had taken at least one developmental education course when the academic year ended in June.¹ In some community colleges, this number was twice as high. These courses, also known as remedial courses, are required of students who have graduated from high school but have been deemed unready for college-level math, writing, or reading. Of students taking developmental courses, data suggest that 40–50 percent will not complete the developmental sequence.² Of those who do, only 29 percent will complete a bachelor's degree.³ According to these numbers, any student who places into developmental education has only a 13 percent chance of eventually receiving a bachelor's degree. The other 87 percent will be stuck with considerable debt and no degree, precluding them from many career opportunities and a likely bump in wages.

In addition to their questionable impact, developmental education courses are costly to students and taxpayers. According to one recent report, the cost of offering these courses exceeds \$2 billion a year, of which approximately \$800 million is borne by students and families in tuition and fees.⁴ To control costs, states have enacted a slew of cost-cutting measures. For instance, some states restrict the number of developmental classes

a student can take, require four-year colleges to push all developmental education to community colleges, and limit funding for developmental education courses. Though these policies may succeed in cutting costs, they also harm those who most need help by reducing access to and support within higher education.

In addition to targeted cost-cutting, colleges are engaged in a wide variety of experiments. For instance, some colleges have tried requiring on-demand online tutoring, additional small-group meetings called supplemental instruction, concurrent credit-bearing courses, condensed developmental sequences, study-skills courses, and automated educational software. Some have even begun to allow students to self-select into remedial

Key points in this Outlook:

- Remedial education courses are costly to students and taxpayers.
- A subscription model would provide an incentive for students to succeed quickly and would limit the cost for those who fail.
- Subscription-priced courses need not replace courses delivered in a traditional manner, but they could complement existing modes of delivery, instructional models, and pricing models.

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courses. While many of these remedies have proven successful and are worth implementing more widely, the overall impact on developmental pass rates has been modest. The limited impact of these academic interventions may be because many students do not complete courses for nonacademic reasons. For instance, a survey of San Diego community college students in 2001 showed that 31 percent of students who withdrew from class cited conflicts with work schedules as the reason. Twenty-one percent cited personal reasons. Only 14 percent cited dissatisfaction with instruction.⁵

While improving success rates of those who take remedial courses is a laudable goal, it represents only half of the developmental education equation. Given the relatively small impact of developmental education interventions, policymakers and education leaders should ask whether we can keep success rates constant or increase them while reducing the cost. If significant cost savings are feasible, these dollars could then be used to address budget shortfalls and the nonacademic barriers students encounter. Rather than implementing targeted cost-cutting measures within the existing institutional staffing and pricing framework, perhaps policymakers and administrators should rethink the way developmental courses are staffed and priced.

Flat-Fee versus Subscription Pricing

In a typical college class, an instructor is assigned a cohort of students and a fixed time frame for the course. That cohort is usually fifteen to forty students, and the duration varies depending on how many credits the course is worth and the format of the course. In this instructional model, a college must estimate the number of students it will have at the start of the course, assume that these students will stay in the course for the entire semester, assume that no more students will be added, and hire the appropriate number of faculty to teach the course. Because the college must commit to faculty members and facility usage for an entire term, students must pay the full tuition regardless of whether they pass, fail, or drop out. This flat-fee tuition model makes sense given developmental education courses' current cost structure.

In the current staffing model for developmental courses, a student who decides in the first month that the course is too hard or too time-consuming or that he is not ready must pay the same amount as a student who succeeds. The student who drops out must pay the same amount even if he stops coming to class, using the school's

facilities, and using the instructor's time. Conversely, a student who is able to move more quickly and who would consume less facility and instructor resources is forced to progress according to the predetermined format of the course. Because of the fixed costs inherent in such a model, both the students who drop the course and those who excel are "punished." Those who excel and those who drop out must pay the full fee despite using very little of the instructor's time and the college's facilities.

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What if a student and state could pay for developmental courses on a monthly subscription basis? A subscription model provides an incentive to succeed quickly *and* limits the cost for those who fail. If such a model could keep outcomes constant or even improve them, a subscription pricing model could reduce taxpayer expenses, student loan burdens, and college infrastructure use and might even encourage failing students to return later to the postsecondary system. Furthermore, savings could be reinvested in support services that help with nonacademic barriers to student success.

How to Get There: Necessary Modifications to the Traditional Model

In a traditional one-to-many, cohort-based instructional model, the student effectively "rents" a spot in a classroom and a portion of a professor's time. Because students are progressing through the class as a group and the professor's time must be allocated to support the material being taught at a single point in time, this spot cannot be used by a different student midway through a semester. Accordingly, if a student drops out or succeeds more quickly, his portion of instruction and facilities cannot be reallocated. Therefore, colleges use a per-course, flat-fee model, also known as tuition.

To build an instructional model in which instruction and facilities can be reallocated, students would need to

be allowed to move at their own pace. At most colleges, self-paced courses come at a cost. Self-paced instruction creates greater flexibility and is less costly but lacks significant instructional support. If comparable instructional support could be provided to students in a self-paced course, then instructional time and facilities use could be allocated much more efficiently. Students could be charged based on how much time they spend using facilities and how much instruction they use rather than on a flat-fee basis.

Can comparable instructional support be provided for developmental courses? To do this, a course would need to be supported by a group of similarly trained instructors who could be available at any time for any student at any point in the course. Though this sounds revolutionary, a wide variety of industries use this model every day to serve a large pool of customers with a defined set of problems. This is a call-center staffing model—although with education there would be no “call,” as the interaction would take place online, nor any “center,” as course instructors could be located anywhere that has Internet access. In call-center staffing, the service provider knows what the demand for its services should be at any given moment, the likely margin of error in that prediction, the average call length, the variance of the call lengths, and the appropriate staffing necessary to hit predetermined service levels. Indeed, call-center services are frequently charged on a per-use basis. The application of such a staffing model to higher education would enable per-use pricing for academic labor in the courses in which such a staffing model is possible.

SMARTHINKING, the company I cofounded, is one of several companies that provide exactly this staffing model for secondary and postsecondary math, writing, science, and business subjects. These services are purchased by hundreds of colleges and high schools. For SMARTHINKING, live, on-demand service is provided twenty-four hours a day, seven days a week. Indeed, this service is purchased by colleges and consumers in blocks of hours from which time is deducted as students use services. All tutors, like a college’s teaching assistants, are trained and monitored for quality control. Over 90 percent of tutors have master’s degrees or PhDs.

Putting the Pieces Together

With the advent of prebuilt course materials available from major publishers, multiple learning management systems, and on-demand tutoring services, whole courses can be pieced together and delivered under an a la carte

or monthly subscription model in which the student pays only for the educational resources used. Interestingly, colleges have built hundreds of courses like this already but under a flat-fee model rather than a subscription model. The National Center for Academic Transformation (NCAT) has helped hundreds of colleges reduce the cost of general education courses while maintaining or improving student outcomes.⁶ The core principles of NCAT course redesign are as follows: 1) Students should engage with content rather than being lectured to by professors. This content will often be delivered digitally; 2) Students should have on-demand academic help; 3) Students should progress through the course based on mastery, not time; and 4) Colleges should use people who are less costly than full professors for basic course management tasks like answering nonacademic questions, ensuring course completion, and other course management functions.⁷

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Though currently charged on a flat-fee basis, the NCAT course redesign model is well suited to a subscription pricing system. Combining these proven models with the modifications to the pricing and staffing structure suggested above fundamentally alters the way colleges offer their developmental courses, benefiting taxpayers, instructors, and students alike.

Where Are the Savings?

The key to realizing savings via a subscription model is the ability of overwhelmed students to drop out quickly and of proficient students to complete quickly. Take the following hypothetical example: suppose that one hundred students need to take a given developmental course; the total cost to taxpayer and student is \$500 per course (flat fee) or \$100 per month (subscription), and 40 percent of students do not complete the class. As table 1 shows, under a traditional flat-fee model, the total cost for one hundred students would be \$50,000. In a subscription model, because students can drop out or pass quickly, substantial savings can result.

TABLE 1
SUBSCRIPTION MODEL SAVINGS

Variables				
Number of students				100
Cost per developmental course (flat-fee model)				\$500.00
Cost per month developmental course (subscription model)				\$100.00
Drop, fail, withdraw rate				40%
Flat-fee model				
Total cost				\$50,000
Subscription model	Total students	No. Failing	No. Passing	Monthly cost
1 month	100	32	12	\$10,000
2 months	56	6	12	\$5,600
3 months	38	1	12	\$3,800
4 months	25	1	12	\$2,500
5 months	12		12	\$1,200
Total		40	60	\$23,100
Total savings				\$26,900
Average cost per student of subscription model				\$231
Percent savings				54%

Source: Author's calculations.

Table 1 assumes that most dropouts will occur early in the course and that 12 percent of the original one hundred students will pass each month. Based on these assumptions, a subscription model can deliver savings of over 50 percent, and many students who would otherwise be \$500 poorer with little or nothing to show for it will have spent only \$100 to test the postsecondary waters. Given that the per-course cost is frequently greater than \$500, this may be a conservative estimate.

Will Student Outcomes Be the Same?

Research from NCAT course redesign efforts has typically shown greater rates of student success and lower costs.⁸ The dearth of subscription-tuition pricing limits our ability to evaluate the model; however, initial evidence suggests that a subscription model has the potential to do as well as, if not better than, traditional developmental courses. For instance, subscription-priced courses are online and self-paced—two factors assumed to be barriers to developmental education success—but the subscription model offers on-demand academic help, which has been shown to increase student success.⁹ The amount of help a student receives in a typical course is limited by

how much time the professor has available, but in the subscription model, the amount of help is limited by how much help the student needs and is willing to pay for. In addition, courses can be started and stopped at any time and therefore offer flexibility to accommodate the demands of a diverse array of students.

Subscription-priced courses need not, and should not, be a replacement for traditionally delivered courses. They can be a powerful complement to existing modes of delivery, instructional models, and pricing models. By combining different models, postsecondary institutions can offer students a wide variety of course options. Students can then choose the one that best meets their needs. Subscription-priced courses could be enhanced to create more structure and stronger learning communities—elements thought to increase student success rates. Though the courses are self-paced, deadlines could be chosen that are either voluntary or enforced. These deadlines could be different for every student. Virtual or physical study groups could be offered in conjunction with these courses to provide additional community support. Lastly, and perhaps most important, this format gives states and colleges tremendous flexibility in pricing and limits. Students could be given a certain number of

months to complete the courses after which the student must purchase instruction independently. States could also choose to subsidize a portion of the cost for a finite period of time, providing an extra incentive for students to finish in a timely manner.

Third-Party Course Provision and Accreditation

Because the delivery of subscription-based courses requires a call-center staffing model, which requires significant scale to be viable, most existing colleges have neither the student volume nor the management expertise to offer courses like this. For now, colleges and states desiring to offer subscription-priced courses will need to look to third parties. At first blush, asking a college to look to another entity to provide courses to its students seems fraught with all sorts of dangers. For instance, is the third party accredited? Will contracting for these courses reduce enrollment, revenue, and faculty jobs at a college? How does the college ensure quality in the contracted courses? How can common course standards be assured?

While many colleges and academics assume that college courses must be delivered by accredited institutions and that a college's faculty must teach all courses delivered by a college, this is not so. Many regionally accredited colleges—with their accreditor's approval—contract with for-profit and not-for-profit entities to deliver individual courses and complete degree programs to their students. Course providers include Bisk Education, Gatlin Education, Ed2Go, Regis University's New Ventures program, StraighterLine, and others. In fact, regional accreditors specifically provide authority to the institution to determine what is credit-worthy.

Opponents of third-party course provision fear enrollment and revenue decline. However, college students already have myriad ways in which to earn college credit and have it recognized by a host college. For instance, colleges award credit for Advanced Placement test scores, College Level Examination Program test scores, dual-enrollment programs for high school students, "life-skills" credit, transfer credit from other institutions, and credit received from coursework approved by the ACE-Credit system. Colleges agree to award credit for deserving students because it helps to attract new students who might go elsewhere if their past academic work is not recognized.

Moreover, recent budget cuts have left state policy-makers and institutions of higher education looking for ways to reduce the cost of developmental education

courses. Many of these cost-cutting strategies have been incremental and have the potential to harm those students who need remedial education the most. A subscription model may become an increasingly attractive option as budget deficits deepen and administrators search for an economical and effective solution to the cost-cutting quandary.

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When seen one way, the prevalence of alternative ways to receive credit seems like a recipe for degrading quality. However, in other industries, very few entities provide all of the inputs necessary to build a product. For instance, a car company does not build all the elements of every car. It purchases parts from other manufacturers and combines them to make the final product. Likewise, the explosion of distance-education alternatives makes it easy for students to choose the courses and prices that make the most sense for them. Increasingly, colleges are being asked to be the guarantor of quality, not necessarily the provider of it.

Most, but not all, of the entities that provide turnkey courses and programs are for-profit. Given that most colleges are not-for-profit entities, this makes some administrators and faculty wary. Their wariness stems from the assumption that for-profit entities will be driven by the profit motive to cut corners on quality or on student oversight. While for-profits may do just that, they are no more likely to do that than not-for-profits. All colleges, no matter their tax status, have incentives to increase enrollment. However, if a course or degree provider is shown to provide low-quality courses, they will lose the partnerships that allow them to be in business. Similarly, if a not-for-profit college loses its accreditation, it can no longer offer financial aid to its students. Though there is bias against for-profit providers of education, this type of college is well established and is the fastest growing segment of higher education.

Conclusion

Technology has long held the promise of lower costs, better outcomes, or both. Such results, however, can only be realized when typical course-cost elements are reorganized and reassembled to take advantage of technology's cost efficiencies. Colleges already reduce their per-student infrastructure costs by offering distance-education programs. In other industries, cost savings and quality improvements are realized when infrastructure changes are combined with personnel changes. To truly change the cost structure of online courses, colleges must be willing not only to offer courses with different cost structures, but also to price courses in ways that more closely match their costs.

Notes

1. U.S. Department of Education, National Center for Education Statistics, *Remedial Education at Degree-Granting Postsecondary Institutions in Fall 2000* (Washington, DC: Department of Education, November 2003), available at <http://nces.ed.gov/Pubsearch/pubsinfo.asp?pubid=2004010> (accessed August 18, 2009).
2. A 2007 study conducted by the Florida legislature's Office of Program Policy Analysis and Government Accountability found mixed results regarding the success of Florida's college preparatory program. Only half (52 percent) of the students who enrolled for the first time in a Florida community college in 2000–2001 through 2003–2004 and who were identified as needing remediation subsequently completed their college preparatory program requirements by the end of 2004–2005.
3. U.S. Department of Education, National Center for Education Statistics, *The Condition of Education 2008* (Washington, DC: Department of Education, June 2008), available at <http://nces.ed.gov/Pubsearch/pubsinfo.asp?pubid=2008031> (accessed August 18, 2009); and Alene Russell, *Enhancing College Student Success Through Development Education* (Washington, DC: American Association of State Colleges and Universities, August 2008), available at www.aascu.org/media/pm/pdf/pmaug08.pdf (accessed September 15, 2009).
4. Strong American Schools, *Diploma to Nowhere* (Washington, DC: Strong American Schools, October 2008).
5. Lijuan Zhai and Rey Monzon, "Community College Student Retention: Characteristics and Withdrawal Reasons" (paper, 2001 California Association of Institutional Research Annual Conference, Sacramento, CA, November 14–16, 2001).
6. More information about the National Center for Academic Transformation can be found at www.thencat.org.
7. Carol A. Twigg, "Improving Learning and Reducing Costs: New Models for Online Learning," *Educause Review* (September/October 2003): 28.
8. U.S. Department of Education, National Center for Education Statistics, *Remedial Education at Degree-Granting Postsecondary Institutions in Fall 2000*.
9. Broward Community College, "Does Tutoring Help? A Comparison of SMARTHINKING-Tutored and Non-tutored Students' Grades College-Wide 2005, Second Semester," August 24, 2005; and Jane Calfee, "Online Tutoring and Student Success in Developmental Writing Courses," *Journal for Applied Research in the Community College* 15, no. 1 (Fall 2007).