BY LISA PETRIDES AND THAD NODINE

Online Developmental Education:

Who's Ready?

The conventional wisdom is that students who are underprepared for college are least likely to access and benefit from online courses. Yet online course opportunities in developmental education are increasing every year. Although there is a need for national research that rigorously examines the effectiveness of online delivery of developmental education, online interactive technologies may offer additional ways to engage some students who might not participate or succeed in traditional modes of classroom learning.

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Online learning opportunities are now widely available in community colleges, and they have been for some time. A conservative estimate published by the National Center for Education Statistics (NCES, 2003) reported that 90 percent of public two-year colleges offered distance education courses in 2000–01. That year, community colleges enrolled about 1.5 million students through distance education, accounting for about 48 percent of the total number of students enrolled in distance education courses nationwide. About 90 percent of the institutions that provided distance education reported that their courses were delivered online (via the Internet through computer-based instruction that was asynchronous—that is, available at any time the student needed the instruction).

Similarly, the demand for developmental education opportunities is widespread in the nation's community colleges. In fall 2000, 98 percent of public two-year colleges offered at least one developmental course in reading, writing, or math, and 42 percent of entering freshmen in public two-year colleges enrolled in at least one such course (NCES, 2004). In some urban colleges, about three of every four new students are underprepared in reading, writing, or math.

Given the demand for distance learning and for developmental education, it is not surprising that colleges would begin offering increased opportunities for online developmental education. Whereas in 1995, about 3 percent of degree-granting two- and four-year institutions offered remedial courses through distance education, 13 percent did so by 2000 (NCES, 2004). For community colleges, the percentages are even higher: a quarter of public two-year colleges offered at least one developmental course in reading, writing, or math through distance education in 2000. About two-thirds of these courses were delivered online (via the Internet through computer-based, asynchronous instruction), and this percentage may have increased significantly over the past five years.

These numbers include courses that are delivered to remote, off-campus sites through technology; they do not include the greater number of hybrid courses that offer some components (such as lectures) on-campus and others online, nor the vast number of courses that deliver an ancillary component online, such as a language lab program or a math workbook.

Key Institutional Barriers

These increases in the online teaching of developmental education are taking place despite several key institutional barriers to its development. These challenges lie primarily in three overall areas:

Inadequate resources for technology support. Many public institutions do not have the financial resources to maintain or expand critical infrastructure needed to support online course development. This includes not only technological infrastructure but also key human resources, such as professional development for faculty. In addition, many developmental education courses are taught by adjunct faculty members who do not have access to the college's full technological and professional development opportunities.

Inconsistent assessment and placement policies. Although experts have identified mandatory assessment and placement as some of the most important practices in building effective developmental education programs, implementation often is undermined by inconsistent policies and practices, both at the state and institutional levels. Open enrollment policies that allow students to continue taking college-level classes without completing developmental education course requirements provide one example.

Low levels of institutional commitment. The population of students needing developmental education continues to rise, yet given the limited resources available for the wide-ranging community college mission, educating the underprepared has been a low priority nationally and within many community colleges. It is difficult enough to secure support for existing developmental education programs, let alone for technological and human innovations related to online course development and delivery.

Concerns about Student Needs

In addition to institutional barriers, there are also concerns specific to the needs of students who take developmental education classes. Some of the primary concerns include:

Student readiness. Some experts in developmental education have argued that online learning requires skills that many students who need developmental education have not yet mastered, such as literacy, time management, and the ability to work independently.

High-touch quality. Traditional approaches to developmental education have emphasized the value of face-to-face interactions, and the importance of socializing in a college setting with other students.

Access. Access to computers and the Internet remains a differentiating factor depending upon demographic indicators such as ethnicity and household income level. Some experts in developmental education suggest that it should not be assumed that students who need developmental education are computer literate or have access to email.

Diverse student needs. Many experts agree that students needing developmental education are particularly diverse; they each have unique learning needs that require differentiated teaching and support strategies. While technology offers creative solutions, online opportunities should not be used as the only means for educating students.

Opportunities for Effective Practice

Given the institutional barriers to the creation of online developmental education and the concerns that online education presents for students of developmental education, how is it that course offerings in online developmental education have expanded so rapidly? Or even more importantly, what do we know about the effectiveness of such courses?

While many colleges have completed some surveys and use studies of online developmental education courses, these have been limited in scope. There is a compelling need for research at a national level to assess the effectiveness of online courses and to guide their future development.

Until this research is available, however, there are examples of pedagogical practices that have been shown to be effective in teaching online courses and in teaching developmental education courses. Not surprisingly, there is much overlap between the two: many of the practices that have been found to be important in creating successful developmental education courses also appear to be important in designing effective courses online. For example, the four key concerns (identified above) related to student needs reveal a broad range of opportunities for effective practice.

Student readiness. Not all students of developmental education are prepared for online course opportunities, and there is a need for studies that can better assess student motivation, interest, and willingness related to online developmental education. In the meantime, however, some colleges have developed and instituted readiness assessments that all students interested in taking online courses must take. These surveys serve the twin purposes of assessing students' preparedness for online courses and informing students of the requirements and success factors for such courses. Other colleges have developed online courses that specifi-cally teach the skills needed to succeed in such classes, such as: cognitive thinking, learning strategies, study skills, motivation for learning, self-regulation, and the academic environment. Not surprisingly, these critical thinking skills related to self-inquiry are also important for success in traditional college courses.

High-touch quality. Studies have found that structured online course opportunities, while they do not necessarily replicate the social aspects of the on-campus experience, can and often do increase the level of interaction between faculty and students, and among students in a course. For example, many online courses take advantage of chat rooms and other features to create robust learning communities online. In many cases, students who are not willing to speak up in class are willing to engage in an online discussion—particularly when their professors require them to post their comments regularly. A study by NCES (2002) found that faculty who participated in distance education interacted with students more than their nondistance counterparts, and had more student contact hours per week. A key challenge for the delivery of online courses—and a key area for study—involves the effective leveraging of interactive technologies to build on the "high-quality" touch

required for effective developmental education. As Carol Twigg pointed out in *Innovations in Online Learning*, using technology effectively requires reframing the structure of courses, not just treating online components as add-ons to existing class frameworks.

Access. Online courses offer some real advantages to students in terms of convenience of access, particularly for students who cannot attend on-campus classes at traditional times, due to jobs, family obligations, or other requirements. While it is true that access to Internet-based technologies can restrict the use of online courses of those wanting to enroll in them, these barriers are lessening due to wider availability of computers and Internet access. Colleges can help to increase access to computer hardware by making computer labs readily accessible for students on- and off-campus. While students without computer or Internet access would need to visit the labs to complete their coursework, they could do so at times that are convenient for them. Also, to improve access for those students who have the hardware requirements but not the computer skills needed, some colleges have created technical and instructional helpdesks for online courses. Students can contact the helpdesk for software, connection, or hardware issues, as well as for information about, for example, course materials or test preparation. Nonetheless, the issue of access continues to be a barrier that requires further study to better understand the changing needs and capabilities of students. Colleges can assist in this process by surveying students (in developmental education courses and otherwise) concerning their knowledge of and access to computers. As Hunter Boylan argues in What Works, colleges need to continue to offer a wide range of course experiences for students and not limit them to one mode of learning.

Diverse student needs. While not all student needs can be met through computer-assisted learning, advanced course management systems have made it possible to vary the online experience to meet the needs of individual students. For example, one university has developed an interactive tutoring program that follows a student's progress in a course and adapts the learning environment to respond to areas of difficulty the student may have. In many cases, the level of interactivity can provide more immediate, individualized feedback to students than professors can provide in traditional settings. It is also possible to establish online support components for students taking traditional courses. For example, one college has created online tutorials to address the learning needs of students in courses that serve as a gateway to college level courses.

Many additional practices have been identified as important in the online teaching of developmental education. David Caverly and Lucy MacDonald have suggested that such courses should make use of online components to: encourage contact with faculty; develop cooperation among students; use active learning techniques; encourage prompt feedback; emphasize time on task; communicate high expectations; and respect diverse talents. Each of these practices, not coincidentally, has been identified as important for teaching generally—and taken together they contrast sharply with traditional course structures built around lectures and end-of-semester exams.

The challenge for the online teaching of developmental education—as it is for teaching in general to a diverse student body—lies in understanding students better, tailoring instruction to their needs, providing support services when and how they need them, providing professional development and support services to instructors, and continuing to refine course elements based on student outcomes and research. Institutionally, despite the challenges of inadequate technological resources, student placement coherence, and institutional commitment, the online delivery of developmental education appears to be on the rise. As Robert McCabe said, "The question regarding technology in education is far beyond whether or not. It is rather how, how much, and how best to use it."

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Lisa Petrides is president and Thad Nodine is vice president of the Institute for the Study of Knowledge Management in Education, an independent research institute located in Half Moon Bay, California.