CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Creating an Effective Online Environment

Why Might Students Perform More Poorly Online?

Online courses present a number of challenges particular to their format. Besides basic technological proficiency, online courses require students to possess an array of well-developed non-academic skills; students must be able to manage time, stay organized, and recognize when and how to ask for help.[1] Online courses also require instructors to be conversant with interactive technologies that enable them to create a strong instructor presence and engage students in the virtual space.[2]

CCRC research indicates that students perform more poorly in online courses than they do in face-to-face courses.[3] Evidence from recent qualitative analyses suggests that online courses may not be providing the range and intensity of supports that students need to perform well online.[4] With the popularity of online courses rapidly increasing, what can administrators do to create an effective "online environment" so that growth in online learning does not go hand in hand with higher course failure and dropout rates?

This guide describes findings from CCRC's qualitative research on online education in one community college system. Drawn from interviews with online students and faculty and observations of online courses, these findings shed light on areas of weakness in online learning. On the basis of these results, this guide presents recommendations to administrators looking to improve online learning at their college.

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This is part two in CCRC's online learning practitioner packet. To learn more about student outcomes in online courses, see *What We Know About Online Course Outcomes* (part one). For more information on effective online teaching, see *Creating an Effective Online Instructor Presence* (part three).

DEFINITION

ONLINE COURSE

Throughout this practitioner packet, an "online" course refers to a course held entirely online, as opposed to a "hybrid" course, which consists of both online and face-to-face instruction.

What the Research Tells Us

Why Do Students Take Online Courses?

Although nearly half of community college students take at least one online course, few students take all of their courses online. Most students enroll in a mix of online and face-to-face courses throughout their college experience. [5]

Investigating the rationale for this mix-and-match strategy can tell us much about the online experience for students. For example, do students make a conscious choice to take only some of their courses online? If so, how do they decide which courses to take online, and what does this decision process suggest about the strengths and weaknesses of online learning?

In the interviews we conducted, almost all students explained that the flexibility of online learning helped them to manage their busy schedules. A handful of students also reported that they could use their time more efficiently with online courses and that online learning suited their personal learning style. Most students, however, indicated that they would not like to take all of their courses online.[6]

Why Do Students Prefer To Take Some Courses Face-To-Face?[7]

INTERACTION WITH TEACHERS	CONNECTION TO PEERS & COLLEGE CAMPUS
Students indicated that in face-to-face courses they felt their relationship with instructors was more "personal," "immediate," "detailed," and "solid." In an online setting, students found teachers to be less accessible; as one student said, "It just seems…when you do it online, if you need help, your teacher is basically not there."	Some students valued interacting with their peers in face-to-face courses but felt that online peer-to-peer interaction was a waste of time. Students also valued the resources available on the college campus; one student said, "I have somewhere to come in person to ask questions."

How Do Students Choose Which Courses To Take Online?

The reasons students cited for deciding to take a course online or face-to-face generally fell into three broad categories: whether the subject was well suited to the online context; whether the course was "easy" or "difficult"; and whether the course was "interesting" or "important."[8] It is evident from our interviews that many students' decisions about whether to take a course online or face-to-face were driven by a perception that it is harder to learn course material online.

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What Factors Determine Whether Students Choose To Take Courses Online Or Face-To-Face?[9]

SUITABILITY OF SUBJECT AREA	COURSE DIFFICULTY	COURSE IMPORTANCE AND INTEREST
Students felt that some subjects—such as languages, public speaking, and laboratory science—were unsuited for the online context. One student said of online German: "When all you do is write your German and type in little prompts, you're not really learning how to speak it."	Students indicated a preference for taking classes they excepted to be difficult in a face-to-face setting. According to one student, "If you're not comfortable *learning the material on your own and teaching yourself*, then you should be in (a face-to-face) class."[10]	Students preferred to take "important" and "interesting" courses (including those in their major) face-to-face. One student told us: "I actually enjoyed the class, so I didn't want to *just* take it online. I wanted to sit in the classroom and *actually learn about it*."[11]

What Are Student and Faculty Expectations for Online Courses?

Students and faculty in the online environment had specific but mismatched expectations for their courses and for each other. Both students and faculty indicated in interviews that online courses were more difficult and time-consuming than they expected. Beyond their shared misperception that online courses would offer an "easy way out," the two groups' expectations tended to differ widely, leading to frustration on both sides and potentially contributing to higher attrition rates for online courses.[12]

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Students and instructors differed most in their expectations for their responsibilities in online courses. Instructors expected online students to be independent learners who are self-motivated with strong time management skills. Although students agreed that these traits and skills are necessary, they expected their instructors to help them with time management and to motivate and inspire them through active engagement in the teaching and learning process.

By examining student and teacher expectations and understanding how they differ, colleges can gain insight into what might make online courses more effective and satisfying for students and instructors. With the benefit of these insights, they can implement readiness activities and training that equips both groups with the knowledge and skills they need to meet expectations in the online environment.

Expectations For Online Courses[13]

STUDENTS	FACULTY
Responsibility	
Teachers will guide and motivate students to learn through engaging activities and varied pedagogical approaches.	Students will be independent learners who are self-motivated and actively seek out help if they need it.
Instructor Presence and Course Materials	
Varied course materials will be used to deliver content. Instructors will have an active presence in the online environment and express "caring" through accessibility and time invested in the course.	Course content will be delivered mostly through text-based materials and asynchronous discussion boards. Instructors will play the role of "content manager" and "guide on the side."
Communication, Feedback, and Guidelines	
Instructors will provide quick feedback via discussion board or email, including over the weekend. Instructors will provide explicit information about assignments and exams, clear grading rubrics, and detailed feedback on graded assignments.	Instructors will not be "on call," particularly over the weekend. If students want more help, information, or feedback on assignments, they will seek it out.

Are Negative Outcomes Associated With Online Courses the Same in All Subject Areas?

Findings from one CCRC study indicate that although students in all academic subject areas performed more poorly in online courses than in face-to-face courses, the effects tended to be weaker in subject areas—such as the physical sciences and computer science—that generally attract better prepared students. In contrast, in subjects that attract a wide variety of students (such as English and the social sciences), the difference in student performance was more pronounced. Interestingly, even students who typically adapted well to online coursework tended to perform more poorly online in these subject areas, possibly indicating negative peer effects.[14] Two academic subject areas appeared intrinsically more difficult for all students in the online environment: the social sciences (which include anthropology, philosophy, and psychology) and the applied professions (which include business, law, and nursing).[15]

Recommendations

To maximize the effectiveness of online courses, colleges should consider improving several areas that may contribute to poor retention and performance: student preparation and support, course quality and design, and faculty professional development.

Student Preparation and Support

Readiness Activities

Success in online courses requires a range of technical and non-academic skills that our research suggests may be lacking in a significant portion of community college students. To address this deficiency, colleges should consider making readiness activities a requirement prior to or during registration periods for online courses, so students can determine if the online course format is appropriate for them. Readiness activities should not only cover the technological requirements and competencies necessary to succeed in online courses but also outline the behaviors and responsibilities expected of students.

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Colleges should also consider integrating scaffolded instruction of online learning skills—such as time management, organization, and reading strategies—particularly into online courses that serve larger proportions of students who tend to perform more poorly in the online context.[16] Many online courses already include course-specific orientations for students. These orientations could be used to delineate the skills necessary for success in the course and to introduce materials and assignments that will give students opportunities for sustained practice of online learning skills.

Screening

Even the most comprehensive readiness activities may be insufficient to impart critical skills to some students, so colleges might want to take the additional step of treating online learning as a privilege rather than a right. For instance, because research indicates that students with lower GPAs are more likely to fail or withdraw from online courses, colleges might consider requiring a minimum GPA to enroll in an online course.

Colleges could also consider limiting or eliminating online sections of courses in which a considerable proportion of students have historically performed poorly. Many colleges have already followed this approach by offering very few online courses in developmental education.

Early Warning Systems

To ensure that online students get the support they need, colleges might want to implement early warning systems that identify and intervene with students who are having difficulty in online courses. For example, if a student fails to sign in to the online system, or fails to turn in an assignment, the system could generate a warning for the instructor, who could in turn call the student to see if he or she is experiencing problems and discuss potential solutions.

Technical Support and Tutoring

Students often choose to enroll in online courses because they are juggling multiple life demands and complicated schedules.[17] Colleges should make sure that they offer support services that are both accessible during non-traditional hours and available online.

Online tutoring, advising, and technical support should be available before and after traditional business hours, as well as over the weekend, and hours of availability should be communicated clearly to online students both on their individual class web portal and on college-wide portals. Although 24-hour services may not be financially viable for individual colleges, it may be possible to offer around-the-clock services through partnerships with for-profit entities or a consortium of colleges.

Course Quality and Design

At many colleges, courses are put online in a relatively haphazard fashion, driven by instructor interest rather than a department- or college-based decision-making process. For this reason, it is often difficult for colleges to monitor their online course offerings and ensure they are of consistently high quality. To achieve greater oversight of their online course offerings, colleges might consider implementing a more centralized system of quality control.

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Some colleges have created a system that allows for greater oversight by building a "virtual campus," a centralized portal where all online courses and programs are listed. In order to have their courses listed on the portal, faculty must go through a "refresh" process with a dedicated course designer. The designer works with instructors to ensure that their courses adhere to an online course template (developed by the designer with input from online faculty) and helps them incorporate instructional tools and strategies that increase student engagement and faculty–student interaction.

Faculty Professional Development

Effective online teaching requires an understanding of pedagogies and technologies that encourage student engagement and instructor–student connections.[18] To maximize the effectiveness of their online courses, colleges must ensure that online instructors receive sufficient training and support.

Colleges might want to require online instructors to complete two courses in online instruction before receiving certification to teach online—one on course design and instructional technologies and one on online pedagogy, with a focus on increasing instructor presence and

student engagement. Colleges should also ensure that online faculty members receive ongoing training and support beyond the initial courses required for certification. Finally, to develop training courses and oversee certification and incentive programs, colleges may need to hire a director of online faculty development.

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Conclusion

Online education holds great promise for community college students, but there remains work to be done before it offers an optimal alternative to the face-to-face experience. Through comprehensive improvement efforts, administrators can create an environment in which online faculty and students have the supports that will help them succeed.

Part three of this practitioner packet, *Creating an Effective Online Instructor Presence*, is aimed at online instructors who are seeking ways to better engage their students and improve retention and performance in their courses. We review our findings on the importance of instructor presence, present a case study, and list considerations for online instructors as they design and teach their courses.

Endnotes

1. Bork & Rucks-Ahidiana (2013)
2. Edgecombe, Barragan, & Rucks-Ahidiana (2013)
3. See *What We Know About Online Course Outcomes*, part one of this practitioner packet.
4. Edgecombe, Barragan, & Rucks-Ahidiana (2013); Jaggars & Xu (2013)
5. Jaggars & Xu (2010); Xu & Jaggars (2011)
6. Jaggars (2013)
7. Jaggars (2013)
8. Jaggars (2013)
9. Jaggars (2013)
10. Emphasis added.
11. Emphasis added.
12. Bork & Rucks-Ahidiana (2013)
13. Bork & Rucks-Ahidiana (2013)
14. Xu & Jaggars (2013)
15. Xu & Jaggars (2013). See part one of this packet, *What We Know About Online Course Outcomes*, for more detail on student outcomes in online courses.
16. See *What We Know About Online Course Outcomes* for information about how different subgroups perform in online courses.
17. Jaggars (2013)
18. See part three of this packet, *Creating an Effective Online Instructor Presence.*

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Funding was provided by the Bill & Melinda Gates Foundation.

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