

HYBRID COURSES AND STUDENT ENGAGEMENT: OPPORTUNITIES AND CHALLENGES FOR COMMUNITY COLLEGE LEADERS*

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1 Introduction

Hybrid courses (also referred to as blended courses) are becoming a ubiquitous delivery mode offered by most higher education institutions. In a 2007 report funded by Sloan Foundation, it was estimated that public undergraduate institutions have the highest penetration rates of online (87.2%) and blended courses (79.4%) among institutions of higher education (Allen, Seaman, & Garrett, 2007).

The hybrid course delivery format has been defined as courses taught with a combination of face-to-face and online instruction that can result in fewer face-to-face meetings with an increase in online activities (Garnham & Kaleta, 2002; Garrison & Vaughan, 2008; Lindsay, 2004; Martyn, 2003; Voos, 2003; Young, 2002).

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The concept of student engagement referenced in this study is the one posited by Kay McClenney. She states: “Providing the foundation for CCSSE’s (Community College Survey of Student Engagement) work is the concept of student engagement – that is the amount of time and energy that students invest in educational meaningful activities” (McClenney, pp. 47-48). Key areas of student engagement, as defined in the CCSSE, include: active and collaborative learning, student effort, academic challenge, student-faculty interaction, and support for learners.

This article summarizes findings from an exploratory research study that addressed strategies to maintain student engagement in hybrid courses. Two components of student engagement were addressed in the study: (a) active and collaborative learning and (b) student-faculty interaction.

Active and collaborative learning is defined by CCSSE as participating in class discussions, working with others on projects, and tutoring other students (McClenney, 2006). Student-faculty interaction is defined as the contact students have with their teachers. CCSSE indicates this occurs when students use e-mail to communicate with an instructor, discuss grades with their instructor, discuss ideas related to class readings, and receive prompt feedback on academic performance (McClenney, 2006).

Decades of research have linked student engagement to positive student outcomes, such as retention, academic performance, and graduation. Maintaining student engagement in the online component of hybrid courses may be important to the success of students. The Community College Survey of Student Engagement documents that the majority (87%) of community college students do not participate in out-of-class activities that are sponsored by the college. Additionally, the CCSSE indicates that interaction outside of the class with instructors and among students is limited due to the external demands on community college students (*Engaging community colleges: National benchmarks of quality*, 2003).

Given that the majority of student engagement occurs within the confines of an individual community college course one may question how engagement is maintained in hybrid courses. Reasons (2004) suggests that students have a sense of confusion that is not present in all-online or all-face-to-face courses. In face-to-face and fully online courses, she believes students have no confusion on where the course interaction occurs.

1.1 Participants

This mixed-method study was conducted in the fall 2008 at an ethnically diverse community college in the Western United States. The study included surveys of 138 students in four course disciplines, surveys of 29 instructors teaching hybrid courses, and in-depth interviews of 9 instructors.

The student sample included a diverse mix of students that were categorized into five groups: White (not-Hispanic) (42.8%), Hispanic (33.3%), Black (7.2%), and Asian/Pacific Islanders (5.1%). A considerable percentage of students (8.0%) chose to classified themselves as “other” and 2.2% of the participants elected not to answer the question. The gender breakdown was 64.5% female and 35.5% male. The students in the study were predominantly from the 18-24 age group (63.8%). The next largest age category was 25-34 (18.8%) followed by 35-44 (13.0%) and 45+ (4.4%). The sample demographics closely matched the student population taking hybrid courses at the institution.

Twenty-nine faculty members teaching hybrid courses at the institution participated in a survey that was nearly identical to the student survey. Additionally, 9 faculty members were selected for in-depth interviews in the four disciplines that were included in the study. The four disciplines that were included in the study were: sociology, English, communication, and computer information systems. At least two faculty members were interviewed from each discipline.

1.2 Measurements & Methodology

Three original instruments were created for this study. The first instrument was a student survey that included 37 quantitative and 2 qualitative, open-ended questions. The survey first addressed the importance of maintaining student engagement in the online and face-to-face components of hybrid courses. When asked about the importance of maintaining these forms of student engagement in specific hybrid courses,

the following Likert scale was used (1) *not at all important*, (2) *less important*, (3) *somewhat important*, (4) *important*, and (5) *very important*. The survey also included two listings of online instructional strategies derived from an extensive review of hybrid and online literature. Students were asked to identify if they experienced each instructional strategies in their hybrid course and to rate the perceived effectiveness of these strategies in supporting active and collaborative learning and student-faculty interaction using a five-point, Likert scale. The scale included the following ratings: (1) *not effective*, (2) *less effective*, (3) *somewhat effective*, (4) *effective*, and (5) *very effective*. Students were given the option of not rating the effectiveness of a strategy if they were unsure of their opinion.

The faculty survey was a mirror image of the student survey. Only minor wording changes were used to address differences in the faculty and student roles in the educational process. The parallel construction allowed for statistical comparisons between faculty and students.

The third tool was a faculty interview protocol that included nine qualitative, open-ended questions designed to elicit faculty perceptions on the types of instructional strategies that maximize the use of the online component of courses to improve active and collaborative learning and student-faculty interaction. The interview data was converged with the quantitative survey data to develop key findings in the study.

To assess the content validity of the survey and interview protocol, a panel of expert judges was used. The use of expert judges to evaluate the relationship of an instrument to the domain being studied is the most common process of content validation (Friedenberg, 1995). The four-member panel possessed extensive experience teaching hybrid courses and/or designing hybrid and online curriculum. The panelists completed a survey to evaluate if the instruments addressed the primary research and key sub-questions. Minor modifications were made to the instruments based on the feedback from the panel.

Testing the reliability of the quantitative survey was accomplished through a beta test with a group of 15 students who were currently or previously enrolled in a hybrid course. These students were asked to take the survey twice with a break between the first and second administration of the survey. A paired-samples t test was used to determine if individual questions had statistically different mean scores between the first and second administration of the survey, using an alpha level of 0.05. There were no questions that received statistically different means between the two administrations of the survey.

2 Results

Discussed here are highlights of the results that addressed the primary research question and key sub-questions. The primary research question was: What instructional strategies do faculty and students attribute to supporting (a) active and collaborative learning and (b) student-faculty interaction in the online component of hybrid courses? Additionally, select sub-questions were addressed. These sub-questions related to the importance of the online component of hybrid courses in supporting student engagement; the correlation between semesters teaching hybrid courses and the number of online instructional strategies used; the impact of course discipline on how students rate the effectiveness of online instructional strategies to support engagement; and differences in student effectiveness ratings for engaging instructional strategies based on age, ethnicity, and gender.

First addressed are potential online strategies to support collaborative learning. Using discussion boards on class topics, supporting student-to-student e-mail, and online peer feedback were identified as the most likely strategies to be effective in supporting collaborative learning and interaction among students in hybrid courses.

The instructional strategies were classified as likely effective, promising and questionable using data from the quantitative surveys (faculty and student) and the qualitative faculty interviews. The first column of Table 1 includes strategies that are likely to be effective based on the following criteria: the strategies received better than average scores (3.4 or higher on the 5-point Likert scale) from both students and faculty, were supported in the faculty interviews, and were utilized by more than 60% of the faculty respondents. Promising strategies can be found in the second column. These strategies had above-average mean effectiveness ratings from both faculty and students, but were either utilized by less than 60% of the faculty or received limited support in the faculty interviews. In the third column questionable strategies received mean effectiveness

ratings below 3.4 from either the faculty or students or else the strategy was identified in the faculty interviews as a substantial challenge.

**Online Strategies to Support Collaborative Learning and Interaction among Students:
Strategies Sorted from Highest to the Lowest Effectiveness Rating within each Category**

Likely Effective High Effectiveness Ratings, High Usage, and Supported in the Interviews	Promising High Effectiveness Ratings with Less Usage or Limited Support in the Interviews	Questionable Lower Effectiveness Ratings or Identified as a Major Challenge in the Interviews
<ul style="list-style-type: none"> • Students receiving peer feedback on their work from other students • Student participation in discussion boards on a class topic • Students providing peer feedback on other student's work • Student-to-student e-mail communication 	<ul style="list-style-type: none"> • Students participating in a discussion board just to get know each other (e.g., Cyber Café) • Students getting to know each other through personal web or Blackboard™ pages (e.g., personal biographies) • Students creating & participating in web blogs on class topics 	<ul style="list-style-type: none"> • Students working together online on group projects • Students using Wikis to collaborate on projects • Real-time online chat between students to discuss class topics

Table 1

The prevalent use of online discussion boards to facilitate class discussions is an expected finding and is a core feature of most course management systems. It is also a primary strategy used in many fully online courses. The vast majority of faculty members in the study utilized discussion boards. Discussion boards were almost always mentioned as a strategy to support active and collaborative learning during the faculty interviews as well. Garrison and Vaughan (2008) propose that in blended courses, online discussion forums can be used to foster critical dialogue and individual reflection between face-to-face meetings. A sociology faculty member who was interviewed commented that she believes her students learn better in the hybrid courses. She indicates that discussion boards contributed to this learning because the students provide more detailed and lengthy responses compared to the classroom environment.

Pratt (1996) indicated that introverted students are more likely to speak up in the online environment compared to the face-to-face environment. This represents another potential reason why discussion boards can be effective in hybrid courses. Two sociology faculty members echoed this same benefit during the interviews. One faculty member acknowledged that students are forced to participate in discussion boards while it is easy for students to avoid participation in face-to-face meetings. Regardless of the motives to participate, some students may be more likely to contribute to online discussions than face-to-face discussions in class.

Having students provide and receive peer feedback online was employed by approximately two out of three faculty members who were surveyed. Both peer feedback strategies received higher-than-average effectiveness ratings by both students and faculty. Peer feedback was also featured in many of the faculty interviews. One English faculty member cautioned that community college students can be resistant to receiving feedback from other students, but she still required students to participate in this online activity because of her strong belief in collaborative learning strategies.

Two of the promising strategies that received higher-than-average effectiveness ratings included the social aspects of students' getting to know each other via personal web pages and the use of discussion boards for informal communication between students. Those findings are consistent with Palloff and Pratt (1999) who

suggest the development of “community” is a parallel process to the course content that is being investigated. They recommend instructors make space for personal issues in online courses. In her qualitative dissertation, Whiteside (2007) found that students praised community building in the face-to-face part of class, but the students did not mention this occurring in the online component of the course. One of her suggestions to foster community building was to have instructors take an active role in the online component of hybrid courses.

The questionable strategies included students working online together on group projects, using Wikis to collaborate on class projects, and real-time online discussions among students. Both strategies, students working online together on group projects and using Wikis to collaborate on projects, received average effectiveness ratings by students and slightly above-average ratings by faculty. More than half the faculty (55.5%) used online group work with their students and less than one in three (31%) used Wikis for students to collaborate on projects. The faculty interviews identified online group work as a challenge and the interviews revealed it is typically not structured (e.g., use of group pages). One communication faculty member mentioned that she recently dropped group pages because it was a burden for the students. Another CIS faculty member mentioned that students organize their own group work online. In this case the group work is driven by the students and not the structure created by the instructor using the Blackboard™ site.

Online instructional strategies to support student-faculty interaction were analyzed using the same criteria that were used for collaborative learning strategies. Using e-mail between instructors and students; instructors providing prompt online written feedback on assignments and exams; and instructors posting online biographical information were identified as the most likely strategies to support student-faculty interaction. Table 2 includes additional categorization of online strategies to support student-faculty interaction.

Online Strategies to Support Student-Faculty Interaction: Strategies Sorted from Highest to

the Lowest Effectiveness Rating within Each Category

Likely Effective High Effectiveness Ratings with High Usage and Supported in the Interviews	Promising High Effectiveness Ratings with Less Usage or Limited Support in the Interviews	Questionable Lower Effectiveness Ratings or Identified as a Major Challenge in the Interviews
<ul style="list-style-type: none"> • Student communication via e-mail with instructors • Instructors providing prompt online written feedback on assignments and exams • Instructors posting biographical information about themselves online 	<ul style="list-style-type: none"> • Instructors monitoring participation and providing feedback to students conducting group assignments • Posting PowerPoint shows created by the instructor • Posting PowerPoint shows with audio narrations by the instructor • Posting streaming video of instructor lectures online • Instructors providing audio feedback on assignments and exams (e.g., WIMBA) • Instructors participating in discussion boards with students • Instructors posting written lectures online • Instructors using Frequently Asked Question (FAQ) Boards to communicate with students 	<ul style="list-style-type: none"> • Posting audio lectures created by the instructor (e.g., Podcasts) • Instructors participating in weblogs on class topics with students • Instructors participating in informal student discussion boards to get to know students (e.g., Cyber Café) • Real-time online chat between faculty and students to discuss class topics

Table 2

The strategy of using e-mail between faculty and students to support student-faculty interaction was highly rated by both students and faculty. In the faculty interviews, the use of e-mail with students was the most frequently discussed theme. Some faculty members shared that e-mail is effective but introduces extra workload. Several faculty members reported that they respond to e-mail frequently throughout the day and some even took their laptops with them on vacation for this reason. The literature supports the use of e-mail to build student-faculty interaction. E-mail communication with students is one of the six questions that comprise the CCSSE benchmark for student-faculty interaction (“CCSSE survey results,” 2007). Kuh, Kinzie, Schuh, and Whitt (2005) found that colleges with high student engagement scores on the National Survey of Student Engagement (NSSE) frequently used e-mail between students and faculty. These researchers indicated that these uses included students asking instructors questions, students sending papers prior to due dates for feedback, and faculty contacting students who were not attending class.

Prompt online feedback was also highly rated by faculty and students and was a featured theme in the faculty interviews. In the interviews, one English faculty member mentioned that it is important to give feedback prior to a final grade because students are more likely to listen to the feedback. A sociology member also mentioned that the feedback needs to be more than grades. Still the concept of prompt online feedback was strongly supported. CCSSE includes receiving prompt feedback (written or oral) on performance from instructors as one of the six elements of the student-faculty interaction benchmark (“CCSSE survey results,” 2007).

Several strategies in the promising category included instructor-created content, such as audio lectures by instructors, streaming video of the instructor lectures, and PowerPoint shows with instructor narration. These received high effectiveness ratings by faculty and students but were not identified in the interviews as a strategy to increase student-faculty interaction. Ko and Rossen (2004) note that audio narration in PowerPoint slides allows instructors to personalize a course. They also suggest that students may respond positively to the video presence of instructors in online courses. However, the lack of mention of these strategies during the faculty interview indicates that it is still unclear if online course content that is personalized by the instructor supports student-faculty interaction.

One strategy was placed in the promising category because during the faculty interviews, there were differing views on whether instructors should participate in class discussion boards with students. A communication faculty member indicated that she participates with students in the discussion boards while two of the sociology faculty members indicated that they stay out of online class discussions conducted by students. One of sociology faculty member indicated that she did not want her students feeling like they were being watched too closely. For this reason, the strategy was placed in the promising category.

Real-time, online chat was the lowest rated strategy in the questionable category. Both students and faculty assigned lower effectiveness ratings to online chat. In the interviews, some faculty members mentioned that synchronous online chat among students can be difficult to implement because it is challenging to get students together at the same time online. Using communication tools, such as e-mail, texting, and phone calls are likely easier to use than arranging an online chat with a student.

A key sub-question addressed the perceived importance attributed to student success of collaborative learning and student-faculty interaction. The student results are presented in Table 3.

Student Survey Questions 6 and 7- Importance of Collaboration and Student-Faculty Interaction			
Likert Scale	N	Mean	Std. Deviation
1 = Not Important at All, 2 = Less Important, 3 = Somewhat Important, 4 = Important, and 5 = Very Important.			
<i>continued on next page</i>			

6a. Overall, how important to your success is having class discussions with other students in this course?	138	3.56	1.11
6b. In the face-to-face part of the course, how important to your success are these class discussions with other students?	138	3.86	1.03
6c. In the online part of the course, how important to your success are (or would be) these class discussions with other students?	137	3.37	1.23
<i>continued on next page</i>			

<p>6d. Overall, how important is (or would be) working on common projects (group work) with other students in this class?</p>	<p>138</p>	<p>3.26</p>	<p>1.20</p>
<p>6e. In the face-to-face part of the course, how important to your success is (or would be) working with other students on common projects (group work)?</p>	<p>138</p>	<p>3.50</p>	<p>1.15</p>
<p><i>continued on next page</i></p>			

<p>6f. In the online part of the course, how important to your success is (or would be) working with other students on common projects (group work)?</p>	<p>138</p>	<p>2.99</p>	<p>1.27</p>
<p>7a. Overall, how important to your success is communication with your instructor in this course?</p>	<p>138</p>	<p>4.53</p>	<p>.68</p>
<p>7b. In the face-to-face part of the course, how important to your success is communication with your instructor?</p>	<p>138</p>	<p>4.46</p>	<p>.77</p>
<p><i>continued on next page</i></p>			

7c. In the online part of the course, how important to your success is communication with your instructor?	138	4.32	.84
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Table 3: Perceived Importance Attributed to Student Success of Collaborative Learning and Student-Faculty Interaction.

Table 3 illustrates that students assigned the highest importance ratings to the communication that occurs between the instructor and the student. The mean importance scores were above (4.0) for the face-to-face and online components of the class. Mean scores for class discussion with other students received somewhat lower mean scores for both the face-to-face and online components of the class. Online group work ($M = 2.99$) received the lowest mean importance score.

A paired-samples t test indicated that students placed less importance ($M = 3.37$) on the online communication that occurs among students compared to the online communication between a student and the faculty member. The results indicated that the mean student ratings (out of a five-point Likert scale) for class discussions between students ($M = 3.37$, $SD = 1.05$) was significantly lower than the mean student importance rating on communication with instructors ($M = 4.31$, $SD = .72$), with $t(136) = -8.24$, $p < .05$, $d = .70$. The 95% confidence interval for the mean difference between the two importance ratings was -1.17 to $-.72$.

Similar results were found on the faculty surveys. Additionally, the high importance placed on the communication between faculty and students was confirmed in nearly every faculty interview. Faculty recounted investing significant time in using e-mail to maintain connections with students. While faculty interviews mirrored the survey results, two faculty members shared a concern that while student-faculty interaction is critical, community college students may be overly dependent on the support of the instructor and often resist seeking assistance from classmates.

The study also suggested that the amount of experience teaching hybrid courses has a very weak relationship with the number of online learning strategies used to support collaborative learning and student-faculty interaction. Intuitively one might expect a robust relationship between the number of semesters a faculty member has taught hybrid courses and the number of online strategies employed. The finding presented here is counter intuitive. The relationship between semesters of hybrid-teaching experience and the number of online collaborative learning strategies employed by instructors was very weak ($r = .263$). Likewise the relationship ($r = .394$) between the number of semesters of hybrid-teaching experience and the number of online student-faculty interaction strategies used was also limited. In both cases, the Pearson correlation coefficient was so weak that the relationship between the variables is inconsequential.

The study also included an analysis of differences based on the four course disciplines (sociology, English, communication, and computer information systems). Effectiveness ratings of online instructional strategies were found to differ by course discipline for just two collaborative learning strategies using the Kruskal-Wallis procedure. After evaluating pairwise differences and controlling for Type I error using a modified Bonferroni adjustment, it was found that communication students provided higher mean rank ratings for using the discussion boards on class topics compared to computer information students. Additionally, communication students provided higher mean rank ratings for using e-mail to communicate with other students than students enrolled in sociology.

Finally, 25 non-overlapping variables on the survey were evaluated for differences based on ethnicity, gender, and age using Kruskal-Wallis and Mann-Whitney U procedures. After applying a modified Bonferroni

procedure there were two differences based on ethnicity, two differences based on gender, and no differences found for age of the student respondents.

The only statistically valid differences related to ethnicity involved the student-faculty interaction strategy of using e-mail with the instructor. After applying a modified Bonferroni adjustment, it was found that Hispanic students had a higher mean rank for e-mail communication with the instructor compared to Black/African American students. Additional White (Not Hispanic) students also had a higher mean rank for e-mail communication with the instructor compared to Black/African American students.

Two socially oriented instructional strategies receive different effectiveness rating based on gender using a Mann-Whitney U procedure. Female students reported a higher mean effectiveness rank for using discussion boards just to get to know students compared to male students. Female students also reported a higher mean effectiveness rank for instructors posting biographical information online compared to the ratings provided by male students.

3 Discussion and Implications

As hybrid courses continue to become more of a standard delivery method in higher education, it is imperative that leaders (faculty division chairs, vice presidents, and presidents) recognize that these courses are different as compared to traditional and online courses. Hybrid courses bring both opportunities and challenges. The perceived “safety net” of the face-to-face session in hybrid courses may reduce the attention that administration and faculty attribute to this form of delivery. Less attention can translate into less research of this format and fewer resources assigned to support hybrid learning.

The need to maintain high levels of student engagement to increase student success is reflected in the strong support universities and community colleges have assigned to the popular national assessment efforts conducted by NSSE and CCSSE. In a recent validation study conducted by CCSSE, the student engagement benchmarks showed a positive and consistent relationship with academic outcomes when controlling for student characteristics and entering ability. The constructs of academic challenge, active and collaborative learning, student-faculty interaction, and mental activities exhibited the strongest relationship to GPA, degree completion, and other academic milestones (McClenney & Marti, 2006).

The importance of student engagement in promoting student success has been documented and supported by both community colleges and universities. The commuter nature of community college students presents a unique challenge because a great deal of student engagement occurs within the confines of the individual class.

The findings of this exploratory study suggest that collaborative learning and student-faculty interaction need to be maintained in both the face-to-face and online components of the course. Student-faculty interaction was identified as the most critical to student success when comparing these two forms of student engagement. Students and faculty in this study also assigned near-equal importance ratings to both the online and face-to-face components of the courses for supporting student-faculty interaction. Interestingly, on the student survey the most frequently cited improvement for hybrid courses in the open-ended question was to add more face-to-face time to the course. While there was a preference for collaborative learning to be supported in the face-to-face component of the course, the reality is there may not be enough class time to sufficiently support collaboration among students.

According to a national survey funded by the Sloan Foundation, leaders at approximately two out three (66.5%) associate level colleges see online education as critical to the long-term strategy of the institution (Allen & Seaman, 2008). It is unclear if hybrid course delivery carries the same level of perceived strategic importance. A broad implication of this study is that university and community college leaders should acknowledge that hybrid delivery is not simply a modification to the number of days a course meets in person. Instead, college leaders should treat the move to hybrid learning in much the same way they carefully plan online courses and programs. For example, it is not uncommon for a faculty member with only traditional teaching experience to be asked to develop a hybrid course without any support or training. Community college leaders can demonstrate a greater recognition of the hybrid format through the development of formal policy related to hybrid delivery, investments in faculty development opportunities for hybrid faculty,

expanded online academic support for hybrid students, employment of readiness assessment for students taking hybrid courses, and requirement of some level of faculty training to teach a hybrid course.

As higher education institutions convert their schedules to support additional hybrid courses, these often come at the expense of a reduced number of traditional courses. At some institutions, it may be necessary for students to take one or more hybrid courses to complete their degrees. Higher education leaders have the incumbent responsibility to ensure hybrid courses provide the same or higher level of student engagement as can be found in traditional courses that use engaging pedagogies.

For hybrid courses to live up to the expectation of being “the best of both worlds,” community colleges and universities need to raise the awareness of delivery format and recognize that unique pedagogical approaches are needed to ensure success of the relatively new hybrid delivery format. Key among these unique approaches is finding ways to maintain student engagement in the online component of these courses.

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