Rutgers University Senate
Instruction, Curricula and Advising Committee

Report and Recommendations on Hybrid Courses

Charge S-0806: Hybrid Courses and Model of Teaching: *Examine the pedagogical, financial and space implications of the increased use of the hybrid model of teaching at Rutgers. Investigate existing models of hybrid courses at Rutgers and other institutions. Identify best practices, and suggest models for Rutgers' hybrid courses. Examine the feasibility of indicating whether a course is taught face-to-face, hybrid, or fully online in the course schedule.*

Hybrid Courses

Increasingly, institutions are adding hybrid courses to their mix of traditional face-to-face and online courses. A hybrid course combines face-to-face lessons (the class convenes as a group in a university facility) with online instruction.[1] Substituting online activity for face-to-face instruction can allow students to benefit from the strength of both modalities. In many cases, when properly developed and implemented, hybrid courses will allow for greater interaction between both the instructor and students, as well as more interaction and collaboration between students than in traditional face-to-face courses. Hybrid courses also offer the advantage of giving time-constrained students extra flexibility of schedule while potentially relieving the institution of some of the demands on it for parking and classroom space.

Committee Process

The Instruction, Curricula and Advising Committee was asked to examine the ways in which hybrid instruction was evolving at Rutgers, and to consider some specific issues in relation to that evolution. Along with reviewing recent literature on the topic, the Committee, or individual members of the Committee, also met with Rutgers faculty members and administrators who were utilizing the hybrid format in their classes or programs. Among those interviewed were Ted Goertzel (Sociology—Camden), who is currently teaching two hybrid courses, Neil Shelfin (Economics—New Brunswick) who teaches a large Intro to Economics section as a hybrid course, Tisha Bender and Darcy Gioia from the New Brunswick Expository Writing Program, which offers hybrid as well as traditional face-to-face sections, and Gary Gigliotti, the Associate Vice President for Academic Affairs and the Director of the Center for Teaching Advancement and Assessment Research.

See Appendix A for details on some of these discussions.

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[1] The use of a course management system, or web-based components, does not automatically define a course as a hybrid course.

Pedagogical Implications of the Hybrid Model

A hybrid course may incorporate online features such as threaded discussions, online peer-to-peer review, online quizzes and exercises, simulations, podcasts and other self-paced presentations. While traditional face-to-face courses may incorporate online features as enhancements within either a course management system or as part of a web site, a well-designed hybrid course will substitute online activities for face-to-face components to create a cohesive whole.

However there is no clear evidence that the hybrid approach is pedagogically superior to other formats. [2] As with other modes of instruction, ultimately the effectiveness of the hybrid mode of instruction depends on the knowledge, skill, and willingness of the instructor to utilize those features which best exemplify that modality within the setting of that particular class.

Hence, while it may not be pedagogically superior, the hybrid format is a valid mode of instruction that may appeal to many students.

Contact Hours

There was some concern expressed by Committee members that hybrid courses may allow for a decrease in contact hours. While the New Jersey Administrative Code sets minimum contact hours for face-to-face instruction, it specifies that "A semester credit hour is not required to be counted on an hour for hour basis for distance learning or blended (or hybrid) learning."[3]

However it was agreed that course content is more critical than time spent in contact, as contact doesn't guarantee content and value.

Face to Face vs. Online

Currently the number of face-to-face meetings vs. online instruction is individually determined by the Rutgers instructor/program. For example:

Goertzel (Sociology-Camden): 25% face-to-face; 75% online.

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[2] In a research project conducted at the Rutgers Graduate School of Education, a 300-level course in Educational Psychology met for 8 weeks fact-to-face. Then half the students went to a hybrid model while half continued face-to-face. Students who had been working at an above average level got even better in the hybrid environment. Students who had been working at a below average level did worse in a hybrid environment. Most likely these are students with deficient study/organizational skills that are magnified in the hybrid environment. [Dean Richard DeLisi, oral communication, September 19, 2008].

[3] *New Jersey Administrative Code*, "Distance Learning and Other Modes of Educational Delivery, § 9A:1-2.1 General program standards"

Sheflin (Economics-New Brunswick): 50% face-to-face; 50% online.
New Brunswick Writing Program; 50% face-to-face; 50% online.

Some institutions include percentages in their definition of hybrid courses; others do not. For example:[4]

City University of New York: Minimally 1/3 fact to face; typically 50/50.
Colorado Technical University: Typically 50/50.
University of Illinois-Springfield: Must have "between four and fifteen on site classes."
University of Wisconsin-Milwaukee: 20% or more online.
Florida State: No University-wide definition.

There was Committee consensus that in a Rutgers hybrid course at least 1/3of the class meetings should be face-to-face and that exams should be conducted on-site rather than online.

Hybrid Course Development and Approval

The Committee also felt that faculty wishing to convert a course previously approved as a traditional face-to-face course, or to offer a section of a multi-section course in hybrid mode, should submit a written proposal spelling out what work would be required in place of face-to-face meetings to the relevant department. Departmental approval would be required for the course to be offered as a hybrid course.

No specific approval is needed for what is merely a "web-enhanced" course.

Course syllabi should also include clear statements of what activities will be conducted during the online portion of hybrid courses.

Training needs to be available for faculty to utilize the available technology most effectively. Faculty also need to be aware that the initial preparation for a hybrid course is far more labor-intensive than the preparation for a face-to-face course.

Format Options

Not all students learn in the same way; the best environment for one student may not be best for another. Students should not be forced into a hybrid environment. Courses offering multiple hybrid sections should, when possible, also offer a face-to-face section.

Students should also be made aware of the format of the class when they register. Accordingly, course schedules should clearly indicate if a course/section is hybrid or online.[5]

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[4] Information taken from ***Best Practices in Hybrid Program/Course Development***. Eduventures: Online Higher Education Learning Collaborative. Custom Research Report, August 2008 Figure 2.

Academic Integrity

The increased opportunity for cheating is potentially problematic for the hybrid model. The Eduventures study[6] lists this as a major concern among the institutions surveyed; Rutgers faculty with whom the Committee met also raised the issue. Using a prediction model with two online courses in principles of economics, Harmon and Lambrinos found that cheating was taking place when exams were not proctored.[7] Neil Sheflin (Economics) reports that about 15 percent of his students fail the final (in-class) exam despite having no apparent problem in passing all the online quizzes. The solution most faculty seem have adopted is to require that mid-terms and finals be taken on-site, and indeed this may be as close as one can get to a fail-safe solution to this problem.

However, in a hybrid course that has been developed following a constructivist framework, the use of online exams may be appropriate. These exams, in which higher-order thinking skills such as analysis, synthesis, and evaluation are emphasized, allow the student to build upon previous knowledge and gain experience in using this knowledge to solve real world problems.[8]

Evaluation in the constructivist learning environment should include problem solving, case-based analysis, and alternatives to exams such as portfolios. Using frequent short tests rather than one or two major exams allows students to build upon prior learning and allows the instructor the ability to compare students' work to previous efforts. Requiring participation in online discussion provides the instructor with numerous samples of a student's writing and critical thinking ability, which can be compared to exam answers. Some additional suggestions can be found in Appendix B.

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[5] Currently Rutgers defines a fully online course as one using the Pearson eCollege platform. Courses not using Pearson eCollege would not be identified as an online course in the Schedule of Classes even if the class never met face-to-face. So students may not be aware that they are registering for an online course. In many cases this also means that a classroom is allocated to the course but never used. While this issue is outside the purview of the current charge, it is one that should be further investigated.

[6] ***Best Practices in Hybrid Program/Course Development***. Eduventures: Online Higher Education Learning Collaborative. Custom Research Report, August 2008, p. 16.

[7] Harmon, Oskar R. and James Lambrinos. (2008). Are Online Exams an Invitation to Cheat? Journal of Economic Education 39(2), 116-125. Retrieved on October 14, 2009 from http://www.journalofeconed.org/pdfs/spring2008/JECE_116-125.pdf

[8] Murphy, E. (1997). Characteristics of Constructivist Learning & Teaching. Retrieved on October 9, 2009 from http://www.ucs.mun.ca/~emurphy/stemnet/cle3.html <http://www.ucs.mun.ca/%7Eemurphy/stemnet/cle3.html>.

The techniques that require the development of essay exams or the use of alternative assessments such as portfolios are most suitable in classes with a maximum of 30 students. For very large classes the only effective solutions are those that involve the development of multiple choice questions that assess higher order learning and the use of the various time limits and online testing security features.

However, while the use of these techniques may significantly decrease the opportunity for cheating, we know they will not eliminate instances of academic dishonesty which inevitably is more prevalent in an online environment that in a proctored classroom. This continues to be an area of concern.

Space Implications

Combining face to face and online instruction allows students to benefit from the strengths of both modalities. However, the principal reason for developing a hybrid course should be for its teaching and learning potential. It should not be economically driven. Nor should it be dictated by the lack of classroom space.

Nevertheless, where an assigned classroom is being used only for part of the time, there needs to be a mechanism by which that room could be made available to other classes during those times when the room is not in use. Currently no such official mechanism exists at Rutgers.

Conclusion and Recommendations

The hybrid format is a pedagogically valid mode of instruction that may appeal to many students. While its usage at Rutgers is likely to expand, the hybrid model should not be seen as something destined to replace all traditional face-to-face instruction.

Recommendations

1 In a Rutgers hybrid course at least 1/3 of the class meetings should be face-to-face.

2. Faculty should have access to training and support that will enable them to use the available technologies most effectively. Training specifically for the creation of hybrid courses should be available for anyone wishing to utilize any of the three major course management platforms in use at Rutgers—Sakai, Blackboard, and Pearson eCollege/eCompanion.

3. Courses offering multiple hybrid sections should, when possible, also offer a face-to-face section.

4. Students should know what the format of the class is going to be when they register. Therefore course schedules should indicate if a course/section is hybrid or online.

5. Faculty wishing to convert a course previously approved for traditional face-to-face meetings, or to offer a section of a multiple section course in hybrid mode, should submit a written proposal spelling out what work would be required in place of face-to-face meetings to the relevant department. Department approval would be required for the course to be offered as a hybrid course. As is the case with all courses, departments should consider how learning goals are being met.

6. Course syllabi should include clear statements of what activities will be conducted during the online portion of hybrid courses. These online activities should at least be equal in time and value to what would have been done in the omitted face-to-face classes.

7. Where an assigned classroom is being used for only part of the scheduled class time, a mechanism by which the classroom could be made available to other classes during those times when it in not in use needs to be developed.

8. The principal reason for developing a hybrid course should be for its teaching and learning potential. Hybrid course development should not be economically driven; nor should it be dictated by the lack of classroom space.

Appendix A
Some Hybrid Course Models at Rutgers
Summary of Committee Interviews

Discussion with Ted Goertzel (Sociology—Camden) and Colleen Adriano (Camden student) Goertzel is currently teaching two hybrid courses:

- Methods and Techniques of Social Research (60 students)
  Required majors course
  Class meets face-to-face once a month (Saturday; 3 hours)
  Using Sakai for online portion
  Course website: http://mysite.verizon.net/tedgoertzel/MethodsFA2008.html

- Cyberspace and Society (46 students)
  Elective
  Meet face-to-face once a month
  Using Google Documents for communication; Sakai for quizzes and assignments.
  Course website: http://mysite.verizon.net/%7Etedgoertzel/CybSocSched.html

This is the first year that Goertzel is offering these classes in this specific format. The format is the result of a needs assessment survey that he had his Research Methods class conduct last year. Students who dropped out from Rutgers-Camden were contacted about their reasons for dropping out and what kind of structure would have met their needs.

Preparation of Course Materials

- The initial preparation of materials for a hybrid course is more labor-intensive than preparing for a traditional fact to face course. However once materials have been prepared they can be reused the next time the course is offered.
- Prepares narrated PowerPoint presentations and podcasts that students can go through at their own pace. Adriano found the narrated screencasts particularly useful.

Face-to-Face Meetings:

- Once a month
- Exams [2 mid-terms & a final] (doesn't really trust to be done in the totally online environment)
- Presentations on statistical methods (many students find this difficult to do online)

Quizzes:

- Weekly quizzes are done in Sakai. Students can take each quiz three times. So they're forced to figure out what it is they don't know.

Discussion Formats:

- Chat
  No longer requires—wasn't possible for all students to be on at one time.

  It is useful at the beginning of the semester to create a sense of community.

- Discussion Board

Adriano feels is most important.

Assessment:

- Performance on quizzes and workbook assignments are measures of student engagement.
- So far test performance is equivalent to that of traditional face-to-face classes.

Tutoring:

- Undergraduate students who have previously successfully completed the course are available two days a week for tutoring assistance.

New Brunswick Expository Writing Program
Discussion with Tisha Bender and Darcy Gioia from the Writing Program.

- Hybrid sections have one regular 80-minute in-class meeting each week during the semester; online assignments, discussion group, chat, and peer review of papers.
- The Writing Program piloted four sections in the Fall of 2007; 15 sections in Spring 2008; 10 sections in Fall 2008, and 15 scheduled for Spring 2009.
- Completing data analysis for survey/interview did in Spring 2008.
- Particularly benefits nontraditional students, students with disabilities, and those who are reticent to speak in classroom discussions.
- Continued classroom sessions provide support and in-person interactions.
- Online peer-to-peer review has been especially beneficial.
- Ability to review archived discussions very useful.
- Traditional face-to-face sections continue to be offered; instructors and students able to self-select format that seems to work best for them.
- Instructors do require initial training on Sakai.
- Since a section is only using a classroom once a week, two classes are able to share a single assigned classroom.

Discussion with Neil Shelfin (Economics—New Brunswick). Shelfin is currently teaching a large (400 students) Introduction to Economics course in hybrid mode.

- Course structure: 50 percent online; 50 percent face to face.
- Even though the classroom is only used once a week there is no official way to release the room on the day that it's not being used.
- Weekly homework is graded and homework review is conducted online.
- Shelfin previously used podcasts but found they were not worth the time and effort.
- The hybrid format gives individual students more opportunities to ask questions and makes it easier to see where they need to focus.
- There is no practical way to require the use of the online discussion board with such a large class.
- Chat also doesn't work due to class size.
- The hybrid model definitely requires more work/preparation on the part of the instructor.
- Not sure he would use a hybrid model again for a large undergraduate class. If done properly it entails substantially more work on the part of the instructor than a traditional face to face class; it's not clear that the educational benefit to the students is proportional to the work required.

Appendix B
Online Exams

There are specific actions that can be taken and assumptions that should be made regarding the online exam:[9]

1. Assume that all exams are open book and create higher order, mastery questions that require a deeper knowledge and application of the material
2. Set a time limit for the exam, so that the student will not have enough time to look up answers
3. Set a limit for re-accessing the exam
4. Use question pools to develop randomly assorted multiple choice questions
5. Scramble answer choices in multiple choice questions
6. Present a clear policy on cheating and enforce it
7. Revise tests every semester
8. Use ExamGuard (available with Pearson eCollege/eCompanion), or equivalents when available, to prevent use of the internet and printing, copying and pasting anything into or from the assessment
9. Track the time, duration, and number of attempts that a student accesses the exam

[9] Krovitz, G. (2007). Ways to prevent cheating on online exams. Educator's Voice 8 (6). Retrieved on October 9, 2009 from http://www.ecollege.com/Newsletter/EducatorsVoice/EducatorsVoice-Vol8Iss6.learn