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Using Blended Learning to Ensure Consistency and Quality in Multiple Course Sections

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Abstract

The purpose of this paper is to provide stakeholders (academic administrators, instructional designers, instructors, and students) with one university's experience with managing multiple sections of the same course, by using a series of instructional techniques that ensures consistent, high-quality, blended courses. Many universities are tasked with teaching multiple sections of foundational courses to large numbers of students. How do administrators and instructors ensure that each stakeholder's needs and requirements are being met satisfactorily? This paper addresses the issues that arise when trying to satisfying the needs of all stakeholders, the role that blended learning plays, and the strengths and challenges of utilizing blended learning and future considerations. It develops a model that uses five strategies for ensuring course consistency, including personnel structure, communication, course design and consistency, assessment and evaluation, and technological and professional development support. Finally, this paper includes a just-in-time tool (Appendix A) that can be used by administrators to address the challenges of incorporating blended learning.

Background

Since the early 1990s, the University of South Florida's College of Public Health (COPH) has offered undergraduate courses in public health that focused on the introduction of public health and contemporary health science issues. Over the past ten years, more courses were introduced and well-received by its undergraduate students. By 2005, the college began to offer the General Public Health Minor with a variety of available courses. Enrollment soared to over 3,000 undergraduate students per semester, which created a need to offer multiple sections of the same courses. During this time, the administration hired a Director of Academic and Student Affairs to oversee all aspects of undergraduate education. The booming undergraduate program served as a consistent stream of student credit hour funding as well as a potential pipeline of graduate students. However, from a pedagogical perspective, the large number of undergraduate students created challenges of instructor and course inconsistencies.

Since the undergraduate student enrollment increased with each new course, the first challenge for the director was to assess the quality and needs of the instructors. The initial purpose of the undergraduate courses was to create teaching opportunities for the doctoral students within the college. Therefore, the obligation remained to mentor doctoral students in all aspects of teaching principles and methods. Since the number of doctoral students available to teach is unreliable, it was necessary to hire an additional pool of adjunct instructors. Among the doctoral students as well as the instructors, teaching competence ranges from limited to many years of experience. In some ways, it is easier to mentor doctoral students with limited experience than to retrain the seasoned adjuncts to incorporate technology into blended learning courses. However, the issue of competing demands is problematic for both instructor types. The doctoral students have research and course work that consume a substantial amount of their time, while adjunct instructors view teaching as an income supplement to enhance their full-time employment. Therefore, it became necessary for the director to find an acceptable balance between ensuring high quality courses and meeting the time management demands of all instructors.

The second challenge involved inconsistency across sections of the same courses. It was quickly discovered that although the same textbook was being used, the syllabi bore little resemblance across multiple sections of the same course. For example, instructors taught the *Introduction to Public Health* course in such a way so as to minimize their course preparation time. Therefore, in reality the students received a variety of course content that closely matched the background of the instructor, including: HIV/AIDS, environmental health, maternal and child health, etc. Since there were no consistent course materials, each instructor was obligated to create his or her own lecture notes, classroom activities, and exams. Some instructors devoted more time to class preparation, while others invested little energy due to their own competing demands. In addition, because the doctoral students are required to teach at least one semester, they may be less likely to design creative, interactive courses for a one-semester commitment.

The challenges faced by the college were addressed and solved with the incorporation of a blended learning format for the undergraduate courses. Since blended learning uses online teaching techniques to enhance classroom experiences, it solves many of the challenges, while creating consistent, high quality courses across multiple sections.

Literature Review

This article considers blended learning to be the use of online media to help support and organize the activities of campus-based courses. It develops this idea and a model for providing consistency in learning across multiple sections. The blended learning literature is extensive, and has been described by many authors (Vaughan, 2007; Whitelock & Jelfs, 2003).

Vaughan (2007) has provided a good review of the blended learning literature. He does so from several points of view, including administrative, faculty and student perspectives. He found that administrators see blended learning both as a means of improving the institution's reputation, and also as a way to reduce operating costs. Students are able to use blended learning to take greater responsibility, not only to manage their own learning, but also manage their time. Finally, faculty finds blended learning provides a means of enhancing learner-instructor interaction. Perhaps Vaughan's most important finding is that blended learning provides a means of continuously improving courses.

Within the context of Vaughan's findings, we took a look at Dick, Carey, and Carey's (2001) model of instruction, which considers five learning components (pre-instructional activity, content presentation, learning participation, assessment, and follow-through activities). These five learning components helped us in the design of our instructional materials, but in addition to the instructional design aspects of our model, we also needed to consider the administrative and support needs surrounding the teaching and learning process (Gentry, 1994). Thus, our model (Perry-Casler, Srinivasan, Perrin, & Liller, 2008) led us to look beyond instruction and to consider other important aspects of the learning environment. This article condenses this model into five strategies for ensuring success in large blended courses.

Strategies for Success in Undergraduate Blended Learning Formats

The five strategies that were employed to achieve consistent learning outcomes across blended courses consisted of personnel structure, communication, course design and consistency, assessment and evaluation, and technological and professional development support. Even though each strategy is a necessary component, the combined parts achieve the highest quality of undergraduate education in a blended learning format.

Strategy 1: Personnel Structure

From an administrative perspective, it was necessary to hire a director to oversee all aspects of the undergraduate General Public Health Minor. The director created a handbook that provides an excellent resource of information related to university administration and undergraduate policies (Perry-Casler et al., 2008). The topics include: teaching qualifications, contract information, course scheduling, salary information, classroom management policies and evaluation procedures.

The director also identified the need for each undergraduate course to have a course supervisor. A faculty person is assigned this duty as part of his or her annual assignment. Often, the person is given this assignment because he/she developed the undergraduate course or previously taught it. Having the course supervisor handle the day-to-day aspects of a multi-section course ensures that the instructors teach the same material in each section. The course supervisor is an integral component for maintaining the consistency across course sections and the blended learning format makes close supervision easily achievable. All standardized course materials are posted on Blackboard, the course management software. The course supervisor can simply check each section to view the notes, reviews, announcements, assignment instructions, and grades without ever stepping into the classroom. On a few occasions, the course supervisor has alerted the director regarding a potential problem within a course. Prior to the blended learning format, such problems within a course were not discovered until the end of the semester through evaluations.

In addition to the director and course supervisor, the College instituted an Office of Educational Technology and Assessment (ETA). This office consists of a director and several highly-trained instructional designers. Prior to every semester, an instructional designer is assigned to several courses. The instructional designer, course supervisor, and instructors work closely together to create the blended format that best compliments classroom pedagogy. Throughout the semester, the instructional designer maintains all aspects of the technological components of several assigned courses.

Strategy 2: Communication

Communication is the cornerstone of the standardization process and instructor support must be multidimensional. To facilitate communications, the director hosts three instructor meetings per semester. The first of the three meetings is held p rior to the beginning of each semester and allows experienced instructors to give guidance and practical advice to new instructors. It also allows instructors teaching the same course to meet each other, exchange ideas, schedule guest lectures, and provide contact information when unforeseen emergencies occur. The subsequent meetings include round robin discussions of challenges and success stories, plus topics such as classroom management, best practices and teaching techniques, and updates on college and university policies. In addition, professional development opportunities are identified at the university, local, state, and national levels.

From a blended learning perspective, the development of an instructor wiki has become a valuable communication tool that allows people to add to and change any document to create one document with everyone's input. Since the course supervisors often teach a section of the course they supervise, they may create a wiki within their course and pose questions on how to improve the class for upcoming semesters. Giving the other instructors access to the supervisor's section allows for participation in the wiki and fosters a feeling of collaboration for overall course improvement. This method of communication

has many advantages, including facilitating communication between instructors and the course supervisor; compiling useful discussion information on course improvement in one location; enhancing the instructors' investment in the courses they are teaching; allowing instructors to thoroughly contemplate and respond to questions; avoiding scheduling challenges; and providing instructors with an opportunity to utilize a new communication tool that they may not have been familiar with before. The course supervisor has integrated many of the suggestions from the wiki into future offerings of each course.

Strategy 3: Course Design and Consistency

Consistency in course design has been addressed in many instructional design articles (Briggs, 1999; Swan, Shea, Fredericksen, Pickett, Pelz, & Maher, 2000). However, in our case, we faced consistency issues among multiple sections of the same course not only within one session, but also across difference sessions of a course. To combat this problem, the course supervisor drafts a course syllabus using the university-approved undergraduate syllabus template before the semester begins. Using the approved course description, the course supervisor determines the course learning objectives; then a meeting is scheduled with the course supervisor, instructional designer, and instructor to create the course schedules, instructional strategies, and assessment methods. The instructors are welcome to add personal creativity to the classroom portion of a course as long as the agreed-upon syllabus and objectives are followed.

For each newly developed course, the course supervisor and instructors divide the duties of creating the course lectures using PowerPoint slides. For established courses, these duties involve updating the course materials and lectures. After the lecture notes have been developed or updated, the instructors review the lectures, modify the content based on course goals, and discuss the changes with each other until a consensus is reached prior to presenting the lecture. Some instructors choose to record and post their lectures on Blackboard as compressed Flash presentations, podcasts, and PDF handouts for students to review at a later date, while other instructors post only the PowerPoint slides and lecture notes. In addition, instructors are encouraged to develop supplemental classroom activities which are shared with other instructors during the meetings or via email/wiki communications.

Based on previous experience, it was also determined that some instructors are "easier" in their grading and expectations than other instructors. This variation resulted in a variable grade distribution across the multiple sections. To solve this problem, two solutions were devised. First, for each objective assessment, a question pool is created to which each instructor contributes a number of questions. The questions are shared with the course supervisor and the other instructors for editing. The instructional designers post each standardized exam by deploying a fixed number of randomly selected questions from the instructor-approved question pool. Therefore, each individual student receives a different set of questions during an exam, minimizing the chances of cheating. Some instructors have the students take online exams at their convenience while other instructors reserve the computer lab in the building and have their students take the exam during a regularly scheduled class section. The randomized question technique eliminates the instructors' ability to select only the questions that they emphasized in their lectures or to eliminate specific course topics that were ignored, a practice which furthermore demands content presentation to be consistent across all sections. Second, for each subjective assessment, a standardized grading rubric is created that clearly explains the instructors' expectations with regard to students' performance on that assessment. By using these consistent measurements, standardized grading is achieved, and students in different sessions are given the same set of assessments and held to the same standards.

Strategy 4: Assessment and Evaluation

Two methods of assessment and evaluation are important administration strategies used to ensure consistency across course sections. First, the blended learning format offers a unique opportunity to elicit detailed information from students regarding the course. Each semester, the course supervisor and instructional designer create an online student survey that is tailored to each course and asks specific questions about the course notes, assignments, and assessments. These mid-semester surveys are posted in each Blackboard section for completion outside of the classroom, and a small amount of extra

credit is given. The results provide a mid-semester account and allow for early intervention when needed. In addition, unlike the required university evaluation, these results are put to use almost immediately and are not recorded or kept in the instructors' personnel file. The survey data are used to reveal trends in student feedback and guide future decisions on all aspects of course management and content. Second, the course supervisor schedules a time to visit each classroom at least once to observe the instructors' teaching style and provide feedback based on their assessment. Although this observation offers only a snapshot of an instructor's teaching, it allows for a perspective that is not captured in the online surveys.

Strategy 5: Technological and Professional Development Support

A lack of technological support and professional development support continue to be the big challenges in blended-learning courses (Dziuban & Moskal, 2001; Garnham & Kaleta, 2002; Vaughan, 2007). At COPH, multiple approaches were used to meet instructors' needs of professional development and technical support for the course. As new adjunct instructors and doctoral students begin teaching in a blended learning format, the administrative challenge is to ensure a minimum level of teaching competencies within the classroom, as well as online technology skills. This situation creates the need for several types of training. First, although most course management systems allow for the same functionality, community-based adjunct instructors need a quick, in-depth overview of Blackboard. In addition, even though the doctoral students understand Blackboard from the student perspective, they need training related to the instructional side.

These as well as other technology training needs are accomplished by the instructional designers. ETA offers a variety of online Blackboard training modules for easy access and quick learning options, and walk-in access for instructors with an immediate need or limited time to attend the scheduled training sessions and quarterly lunch-and-learn seminars. The goal of ETA is to provide ongoing and consistent technology support for instructors and to enhance and facilitate presentation of course content and student learning based sound learning principles. Second, since the blended learning format maintains a classroom teaching component, it is also important to provide instruction for classroom pedagogy and strategies. The Director of Academic and Student Affairs, in cooperation with the course supervisors, offers an instructor training seminar for all doctoral students as a portion of their mandatory student orientation. Adjunct instructors are welcome to attend. In addition, the doctoral students are encouraged to present several guest lectures during the semester prior to teaching the same course. This technique saves the doctoral students lecture preparation time the following semester and allows them to experience the undergraduate student environment prior to having responsibility for an entire course; and as previously mentioned, the director hosts the instructor meetings for added support.

Lastly, students receive technical assistance via a 24-hour help desk which was established by the ETA staff to provide evening and weekend technical support for online exams. An on-call phone number is provided to students who are taking exams during non-business hours. Technical problems reported are logged and addressed within a 24-hour period and seven days a week by the ETA staff. This log provides valuable information, because technological issues in one section are often an indicator and warning to the instructional designer that identical problems may appear and need to be addressed in other sections of the same course. In addition, by having a continual feedback loop in place between the instructional designers, course supervisors, and instructors, students receive the classroom and online support needed for a high quality of education in a blended learning format (see Appendix A for a checklist).

Challenges for Consideration

Even though the identified strategies facilitate blended learning formats, several challenges persist, including: textbook issues, instructor turnover, technological updates, and budget constraints.

Challenge 1: Textbook Selection

Challenge 1: Textbook Selection

While maintaining consistency across multiple course sections presents a variety of personnel challenges, another issue of consideration is the selection of a new textbook. On the positive side, a new textbook selection initiates course revitalization or a complete redesign that likely improves the overall course delivery and content. On the other hand, textbook changes demand an incredible time investment to create high quality, standardized materials. Although it may be tempting to rely on publishers' instructor materials, the quality of these materials is often substandard and they need to be revised. Therefore, the time-consuming task of creating new, high-quality lectures and assessments must be undertaken by the course supervisor, instructional designer, and instructors. Fortunately, blended learning allows courses to be changed gradually, since the online activities may remain applicable even though the classroom textbook has changed. Also, blended learning formats make the dissemination of new course materials easy, since items are posted into each course section with little effort or time.

Challenge 2: Personnel Changes

Another challenge in maintaining course standardization relates to personnel changes. Since turnover of doctoral students and adjunct instructors is inevitable, course supervisors must always ensure that new instructors are teaching course content in a consistent manner, and have the technical skills necessary to utilize the online components of blended learning formats. Although blended learning formats ensure that similar course content is being utilized, new as well as experienced instructors encounter learning curves when textbooks change, course management systems are updated, technological changes occur, or new university policies are implemented. Since administrative personnel also change, each new director or course supervisor brings policy and program changes.

Challenge 3: Technological Changes

The ever-changing technology forces instructional designers, course supervisors, and instructors to continuously reassess, regroup, and reevaluate the use of technology features in the blended courses, while maintaining a high-quality of instruction in the classroom. While keeping a watchful eye and a willingness to adopt new technological tools and programs into blended learning, the challenge is to find the appropriate educational balance between meeting the needs of the low-tech versus the high-tech users, including administrators, course supervisors, instructors, and students. Although new technology tools can appear to be useful for blended learning formats, a change may be viewed as merely another steep learning curve that requires precious time to conquer, with limited reward for the user. Under the expert guidance of the instructional designers, new technology tools have been incorporated over time, since most users are comfortable and willing to incorporate a few gradual changes into teaching and learning formats (Perry-Casler et al., 2008).

Challenge 4: Budget Constraints

In today's economy, every educational challenge stems from budget constraints. Since the ETA office is self-funded from student technology fees, the College delivers high quality, cutting edge educational technology services without straining the College's budget. Since the incorporation of blended learning formats in the undergraduate courses, the instructor turnover has diminished, thus saving time for the director and the course supervisors and allowing them to spend needed time on other projects. The largest money-saving result of blended learning has been the vast decrease in paper consumption. Lecture notes, course materials, activities, and exams are posted on Blackboard, transferring the responsibility for printing costs to the student. In addition, distributing mobile course content in the form of podcasts provides easy access and flexibility while discouraging students from printing materials. Before the incorporation of blended learning, if every instructor distributed 20 sheets of paper to each student, the College would buy 120 reams of papers per semester plus copy toner and copying time.

Conclusion

Standardized course delivery with consistent learning outcomes remains the primary goal for the General Public Health Minor at the University of South Florida. Blended learning provides strategies and addresses most of the challenges, because it creates consistency of learning, teaching, subject matter, and materials. Since course content remains constant across multiple course sections, the inconsistencies of inexperienced instructors or idiosyncratic materials are minimized. Now that students receive the same content and the same assignments as their peers in other sections, we are able to ensure consistent learning outcomes. Students have the opportunity to choose from a variety of courses as the college is able to offer many more courses due to course standardization. In addition, doctoral students and instructors who are new to teaching find the blended learning format useful, because the added load of developing new materials is no longer an issue.

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APPENDIX A:

JUST IN TIME TOOL: CHECKLIST FOR ADMINISTRATORS TO ENSURE CONSISTENCY IN MULTIPLE SECTIONS OF A COURSE