



## The Effects of a Last-Minute Change in Course Format: A Case Study of One Hybrid Anatomy and Physiology I Course

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### Abstract

*It is not easy for college administrators to find instructors to teach every section of every scheduled course each semester. This applies to most institutions of higher learning. In this particular circumstance, Maria College did not have an instructor to cover a face-to-face Anatomy and Physiology (A&P) I lecture just one week before classes were to begin. In order to get coverage, it was decided to change the course to a hybrid format. The students would meet with the instructor once per week and complete the remainder of the material on their own. This case study evaluates the grades from 13 students in this hybrid course in comparison to student results from a face-to-face A&P I course taught by the same instructor during the same semester. Twelve of these students were originally scheduled for the face-to-face class that was converted to hybrid format. One student switched into the hybrid section from a face-to-face class because it fit better with their home schedule. When comparing the grades of this hybrid section to a face-to-face A&P I course taught by the same instructor, there was no significant difference in student grades. This was the case despite the majority of students being unhappy with the new format and feeling that they would have done better if the course remained face-to-face. The students perceived that they were at a disadvantage by taking the hybrid course, but their grades showed them to be on par with a face-to-face section of A&P I taught by the same instructor. Student feedback and recommendations for future hybrid A&P courses will be provided.*

### 1. Introduction

Maria College, located in Albany, New York, U.S.A, serves largely a non-traditional student base, with many students already in the workforce and coming back to school. In order to accommodate the students' schedules, so they can balance college with their work and home life, Maria College has begun to offer numerous courses in a hybrid (blended) format [1]. This involves students spending part of their time in the course on campus meeting face-to-face with the instructor in a traditional classroom environment and the rest of their time in the course outside of the classroom. This typically involves the students having to spend the remainder of their time completing online assignments to make up for the time they are not meeting face-to-face with the instructor [2].

One week before classes were set to begin during the Fall 2016 semester, a scheduled face-to-face section of anatomy and physiology (A&P) I lecture still needed an instructor. With little time left to find an instructor, it was decided to change the course to a hybrid format in order to fit it into the schedule of the instructor who was approached to teach the course so close to the start of a new semester. This was considered a viable option because the college regularly holds classes in a hybrid format; however, this was the first time that A&P would be run in hybrid format at Maria College.

The class was originally scheduled to meet face-to-face on Mondays and Fridays for 1 hour and 15 minute intervals during the early afternoon. The instructor who was asked to teach the course could not meet on Fridays, so it was decided to have the students come to class every Monday and they would complete the rest of their class time online on Blackboard, the course management system used by the college.

Currently, no peer-reviewed journal articles have been published on how last-minute changes to course format affects students, which was the purpose of this study. This was accomplished by comparing grades earned by the students in this one hybrid A&P I class to the grades earned by the students in the face-to-face A&P I class taught by the same instructor during the same semester. This study also examined student perceptions of the hybrid class.

### 2. Methods

The sample included 13 students from 1 hybrid section of A&P I during the Fall 2016 semester at Maria College. Of these participants, 12 were female and 1 was male. This study examined lecture

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grades from this hybrid course and lecture grades from the face-to-face A&P I course taught by the same instructor during the same semester. This study did not evaluate attrition in this course. The reason for this is that prior to the Fall 2016 semester at Maria College the A&P labs were separate from lecture. Lecture was worth three credits and lab was worth one credit. Starting in the Fall 2016 semester, lab was combined with lecture so that the lecture was worth four credits and the lab was worth zero credits. Additionally, starting in the same semester, significant changes were implemented in the A&P labs to make them more rigorous in comparison to prior semesters. As a result, attrition was higher in the labs during the Fall 2016 semester than previous semesters. Therefore, this study did not examine attrition in the hybrid A&P I class because the results would be skewed by the lab grades. Lecture on the other hand did not significantly change from previous semesters, so the researcher looked at only lecture grades in this study.

This was the first time that the instructor had ever taught a hybrid course. The instructor typically teaches face-to-face, only once teaching an A&P II course entirely online. Three quarters of the way into the semester, the instructor asked the students to provide feedback on the course during a brief discussion session. The purpose of this feedback was to see what improvements could be made to the students' experience in the course and what could be done to improve the course if a hybrid A&P is offered again in the future. In order to gather expanded feedback from the discussion session and in order to ensure that all students could have the opportunity to fully share their thoughts about the course, the students were asked to complete a brief survey about the course. This survey was given to them after they completed their final exam at the end of semester.

The face-to-face version of A&P I taught by the same instructor was held in the evening and had a total of 22 students; 20 were female and 2 were male. In order to ensure consistency between the hybrid section and face-to-face section, the instructor provided both sections with access to each PowerPoint and supporting videos on Blackboard. During each evening lecture, the instructor voice recorded the lecture and posted it on Blackboard for the hybrid students to hear. This was to ensure that both groups of students were receiving the same content in lecture from the instructor. The recordings were not posted on Blackboard for the evening students because they were present in class to hear the lecture and they had the option of recording the lecture on their own personal recording devices. The instructor provided student lecture notes predominantly in PowerPoint, but did occasionally write notes or draw diagrams on the board. During the semester, hybrid students vocalized their concerns about not being able to see what the instructor was writing on the board. Following the advice of one student, the instructor requested that a top-scoring student in the evening section allow the instructor to take pictures of the drawings from the board in their notes. These pictures were posted on Blackboard along with the voice recordings. Additionally, both sections were given the same exact exams throughout the semester, including the final exam. There were a total of five lecture exams throughout the semester in each class and one cumulative final exam at the end of the semester.

### 3. Results and Discussion

Based on the survey results, 10 out of 13 students were unhappy with the format of the course. It is likely that this number would have been lower if the students had known it was going to be a hybrid course from the start. 12 out of 13 of the students had registered for the course when it was scheduled to be face-to-face. Only one student actually switched into the class once it was changed to hybrid format because they felt it would be more convenient with their home schedule. If the course had been listed as a hybrid course from the moment that registration began, students would have possibly been able to take a different section of the course. With the majority of the students having personal, work and class schedules that could not be changed one week prior to the semester starting, they could not switch into a different section. These students that wanted to switch into a different section but could not because they could not alter their schedules with such short notice, resented the course change and maintained their resentment throughout the entire semester. If the students had made the choice to take the hybrid section on their own, it is likely that the students' perceptions of the course would have been different. The one student that chose to switch into the hybrid course specifically stated on their survey that they did not have a problem with the format of the course. Courses in hybrid format will not facilitate learning for all students [3], so it is likely that students who feel they personally benefit from the traditional classroom environment would be less likely to choose to take a course that is more self-directed.

Out of the 13 students, 12 had never taken a hybrid course before, although 4 students did disclose that they had taken an online course before. The instructor assumed that those students who had taken an online course before would have felt more comfortable with the course being in a hybrid



format. Interestingly enough, those four students that had taken a course completely online before did not like the hybrid format of the course and would have preferred for the course to be delivered face-to-face. The one student that had taken a hybrid before reported that they had taken it at a different college and enjoyed the A&P I class in the hybrid format.

The students stated that they would have preferred that the instructor video-taped the lectures instead of voice recording them. They reported difficulties in following along in the lecture PowerPoints when listening to the recording. They stated that they thought they would have benefited by seeing the instructors hand gestures and watching what the instructor was writing up on the board.

Similar to the study conducted by Glogowska, Young, Lockyer, and Moule [1] students in this study reported the online and face-to-face components of the course felt disjointed at times. This could have been due to the instructor teaching a hybrid course for the first time. It could have also resulted from the time that the students did meet face-to-face with the instructor that time was used for testing and to cover the more difficult topics within each unit. If A&P is offered again in the future in hybrid format, the instructor should consider having the students complete their exams online so the time in the classroom can be spent covering material that the students might have difficulty grasping on their own.

An interesting finding from this study is that although the majority of students perceived that they were at a disadvantage by taking the hybrid course, their grades were not significantly different than student grades in the face-to-face section taught by the same instructor during the same semester. When examining the combined exam grades from the five lecture exams from each section, the hybrid section and face-to-face sections had exactly the same median score, 81.00%. When looking at the final exam scores between each section, the median grade for the hybrid section was 80.00% and 80.50% for the face-to-face section. Therefore, there was not a significant difference (0.50%) in grades between the two sections. So, from a testing-performance standpoint, the students in this study did not seem to be negatively impacted by this specific last-minute schedule change. Yet, from a student perspective, the majority of these students felt that they would have performed better on exams if the course remained in the face-to-face format.

#### **4. Conclusions**

College administrators are under immense pressure to create a schedule that meets student needs, but also to find instructors to teach all of the scheduled courses each semester. It is understandable why last-minute schedule changes occur and though these changes are not necessarily done in the interest of the students, it is important to understand how these changes impact the students. It is also important that administrators and instructors reassure the students that they will not be at a disadvantage because of the changes, specifically if the format is changed from face-to-face to online or hybrid. If students believe that they will benefit from taking the course in hybrid format and that there is value in taking the course in a non-traditional format, they will be more likely to accept the change and be more satisfied with their experience in the course [2]. Not only is there value in taking a hybrid course because of increased flexibility, but as can be seen from the results of this study, students are likely to perform as well in hybrid courses in subjects like anatomy and physiology as they are if the class was provided in face-to-face format.

#### **References**

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