

A STUDY OF SELF-REGULATED AND NON SELF-REGULATED LEARNERS IN A HYFLEX LEARNING ENVIRONMENT

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ABSTRACT

While still maintaining the face-to-face classroom structure, Texas A&M University-San Antonio (TAMUSA) offered a “HyFlex” program, which adds the online education pedagogy with computer-mediated activities to interact with those students who are unable to physically be present in the classroom. This novel approach allows students who are separated in time and/or space from their peers and instructors to have the same opportunity to obtain the same quality of education and similar learning environments. This study examines the reflections on the self-regulated and non-self-regulated learners by evaluating their performances from two large sections of quantitative courses. In this study, we seek to examine the relationship between the students’ performance and their decisions on attendance options in the same class from multiple perspectives. Our aim is to recognize the academic achievements of those students who have been identified as self-regulated learners. In this study, we will also collect the data from those classes which are only designed for the traditional, in-class format and compare their learning outcomes. The findings of this paper provide evidences to clarify the preconception of quality assurance and efficacy on distance learning for quantitative courses.

INTRODUCTION

The conceptual idea of distance learning has had a long history, but an online education degree was not granted until the mid-1990s when the distance learning organization “CALCampus” introduced the first entirely online curriculum. Nowadays, more and more online courses are available for college students, adult learners, and even K-12 students. According to the National Center for Education Statistics, in 2012, non-traditional students (see Appendix 1) constituted about 38% of the students (over 6.6 million) enrolled in undergraduate degree-granting institutions [8]. In order to accommodate more students, universities are offering ‘hybrid’ or blended courses in which a portion of the traditional face to face instruction is replaced by asynchronous online activities. This hybrid model between traditional and online courses normally limits the online component to about 50% of class time. 25 percent of the students who enrolled at Title IV institutions in the fall 2012 semester were taking classes either associated with distance learning or completely online courses [9]. One in every four Title IV institutional students is receiving their education through some form of distance learning, which has faced serious concerns of quality assurance. Many still argue whether students can actually take responsibility for their own educational objectives to obtain similar learning experiences as traditional face-to-face classes. Thus, there has been a long-term debate on these two learning environments. However, due to the global demand from the Internet and the needs from prospective students who are separated in time and/or space from their peers and instructors, the context of the traditional teaching

methods encounters a great deal of competition and challenges. Consequently, many traditional universities use blended learning environment to increase enrollment and meet the potential students' needs. While still maintaining the face-to-face classroom structure, Texas A&M University-San Antonio (TAMUSA), College of Business, offered a "HyFlex" program, which combines the online education pedagogy with computer-mediated activities to interact with those students who are unable to physically be present in the classroom. This novel approach allows students who are separated in time and/or space from their peers and instructors to have the same opportunity to obtain the same quality of education and similar learning environments. In practice, students can freely choose among the three attendance options:

- (1) attend the class in person,
- (2) attend the class online synchronously, or
- (3) attend the class online asynchronously by viewing the recorded lecture in their spare time.

The "HyFlex" format gives students the flexibility to choose any of these three options in any given class to fit their schedules for that meeting on a case-by-case basis. In other words, they can attend one lecture in-person and the next online, and move back and forth at will. This convergence of traditional classroom and online education has had a huge impact on the traditional campus-based institutions for higher education. For this reason, transformative innovation for higher education becomes a new trend for the 21st century and its new generation of learners.

LITERATURE REVIEW

Hybrid learning, also known as blended learning, combines face-to-face lectures and tutorials with an online learning management system such as Blackboard or Moodle [2]. However, in the HyFlex instruction, the student, instead of the instructor, selects the format they think it will satisfy their learning needs [3]. In a recent paper, Kyei-Blankson, Goodwill and Nur-Awaleh [4] find that students in HyFlex courses value the program flexible, convenient, and meet their learning styles and personal needs.

Quantitative disciplines, which traditionally require more faculty-student interaction, may be less adequate to improve student learning outcomes than non-traditional instructional formats when adopting the HyFlex format. There are mixed results on whether non-traditional lectures lessens learning outcomes of students in quantitative disciplines. Using a small sample, Scherrer [7] finds no significant differences in student effort or in student completion of an undergraduate statistics course. However, she also finds that students in the traditional section have better performance than both hybrid and fully online classes. On the other hand, Bowen, Nygren, Lack, and Chingos [1] document that students "pay no price" for taking hybrid undergraduate statistics courses versus the traditional face-to-face lecture. Martinez and Campuzano [6] found that students in hybrid engineering courses showed greater satisfaction with their learning experience than traditional ones. Farley, Jain, and Thomson [2] argue that undergraduate finance students at a large Australian university still show a strong preference for face-to-face learning as opposed to hybrid or online learning; however, the limitation of their study is that they neither evaluate student learning outcomes nor the perception of students who may stream live lectures over the internet.

BACKGROUND OF THIS STUDY

This study examines the reflections on the self-regulated and non-self-regulated learners by evaluating their performances from two different types of quantitative courses (i.e. "Quantitative

Methods for Business” and “Business Finance”). Based on the “self-regulated learning theory,” self-regulated learners are aware of their academic strengths and weaknesses; they will take any given opportunities to exert effort toward their educational attainments [10]. To comply with the HyFlex format, each class lecture has been recorded, thus students actually have the opportunity to go back and review the lecture video after the class even after they originally choose options (1) or (2) as their attendance options. As a result, students enrolled in the “HyFlex” class are fully in control of their own learning environment. Thereby, this format presents a unique opportunity to study learning outcomes between students who are self-regulated and who are not under the exact same education environment (i.e. same class, same instructor, same assignments, same due dates, and same examinations).

In this study, we seek to examine the relationship between the students’ performance and their decisions on attendance options in the same class from multiple perspectives. First, we will observe the relationship between students’ preferences on attendance options and their general backgrounds such as gender, age, race, credit hours enrolled at school, employment status, and overall GPA. Additionally, we will identify the relationship between students’ performance and preference on attendance options. Is there a shift between/among students’ attendance options (i.e. attend in person versus attend online synchronously or even asynchronously) after a failure occurred on one of the assignments? More specifically, our aim is to recognize the academic achievements of those students who have been identified as self-regulated learners, those not only attending the class face-to-face or online synchronously during the scheduled class time but also view the lecture recordings after the class. As is well documented in educational environments, repetition, as the saying goes, is the mother of learning. By theory, they should appear to achieve more positive academic outcomes than those individuals who do not obtain self-regulated learning behaviors. In this study, we will also collect the data from those classes which are only designed for the traditional, in-class format and compare their learning outcomes. Finally, the findings of this paper will provide evidence to clarify the preconception of quality assurance and efficacy on distance learning for quantitative courses. Our supporting staff in this applied research project will provide the appropriate assistance based on our findings to modify the online learning environment so that we can accommodate students’ potential needs and attract more self-regulated learners to pursue their education at TAMUSA.

METHODOLOGY

The overall goal of the study is to evaluate the effectiveness of the new classroom instructional approach, which allows us to contribute to the extant research on the effectiveness of online versus traditional instructional methods at both the individual and class level. However, at the individual level, results are available only for students who agreed to participate in the study and who completed the survey. This study was approved by the Texas A&M University-San Antonio Institutional Review Board, and all students read and signed an informed consent prior to complete the survey.

This study involved two-large sections of TAMU-SA’s HyFlex undergraduate classes. Each class has at least 70 students, for a total sample up to 150. Both classes use Adobe Connect which allows students the options of attending class face-to-face, online synchronously, or online asynchronously.

Since students may choose any of the options that fit their schedule for meeting on a case-by-case basis during the semester, it is interesting to see if there is any relationship between students’ learning outcomes and the individual student making his or her own decisions regarding whether to attend class in-person, online synchronously, or online asynchronously.

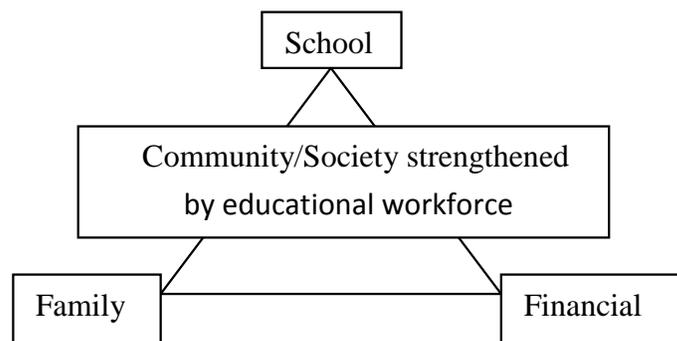
Initially, attendance is taken during each class by means of a sign-in sheet for in-class students and record of logins and participation by online synchronously students. This will be used to assign students to one of three primary categories of student participation in the class: (1) students who primarily attend in-class, (2) students who primarily attend synchronously online, and (3) students who

primarily attend asynchronously online. The results of this study will categorize each student (as shown above) and then compare the students' final grade to their classroom or online attendance. By using those categories above, we further put students into seven different sub-categories (since student can attend one lecture in-person and the next online, and move back and forth at will) to see if there is any correlation between students option behaviors (see Table below) and learning outcomes among each regular quizzes (or semester assignment):

Option 1	Attend the class face-to-face
Option 2	Attend the class online synchronous
Option 3	Attend the class online asynchronous
Option 4	Attend the class face-to-face (1) + online synchronous (2)
Option 5	Attend the class face-to-face (1) + online asynchronous (3)
Option 6	Attend the class online synchronous (2) + online asynchronous (3)
Option 7	Attend the class face-to-face (1) + online synchronous (2) + online asynchronous (3)

EXPECTED RESULTS

There is always a delayed outcome while students get accustomed to any type of classroom technology support in addition to their learning according to the paper published by Liu & Sosa-Fey [5]. We may experience the similar situation while the school continues moving forward to a HyFlex approach to classes as well as students value the flexibility of the delivery format and not take advantage of it without taking the full responsibilities. Nevertheless, based on the proposed research and abstract of offering the online educational option simultaneously with face to face traditional classes, this educational innovation would be favorable to include the greatest number of student participants since it offers a flexible option to a mature workforce that is balancing financial responsibilities and family commitments within semi-rigid schedules and time constraints (see Figure below).



By offering this positive option, it will create an environment best suited for those that are self-regulated. This educational paradigm shift will create and enhance a culture that will be ideal for those students who perceive its advantages. This will create a positive increase in student enrollment meeting educational financial objectives. These types of students selected by this educational culture will be a benefit not only to themselves but also to their instructors as it will yield the highest overall satisfaction as student and teacher grow symbiotically towards higher educational objectives [4]. Since a healthy educational image allows a university to charge a higher tuition creating intrinsic value in that education institution, this created culture will not only be financially advantages but will yield the greatest good to a society in desperate need of an educated workforce.

APPENDIX

The National Center for Education Statistics (NCES) defines non-traditional college student as an individual who either delays enrollment after finishing high school, attends part-time, works over 35 hours per week, has dependents other than a spouse, or is a single parent.

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