

Different Roles for Mentors and Mentees in an e-Learning Environment

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Abstract—Given the increase in the number of students and administrators asking for online courses the author developed two partially online courses. One was a biology majors at genetics course while the other was a non-majors at biology course. The student body at Queensborough Community College is generally underprepared and has work and family obligations. As an educator, one has to be mindful about changing the pedagogical approach, therefore, special care was taken when designing the course material. Despite the initial concerns, both of these partially online courses were received really well by students. Lessons learnt were that student engagement is the key to success in an online course. Good practices to run a successful online course for underprepared students are discussed in this paper. Also discussed are the lessons learnt for making the eLearning environment better for all the students in the class, overachievers and underachievers alike.

Keywords—Partially online course, pedagogy, student engagement, community college.

I. INTRODUCTION

STATISTICS from the U.S. Department of Education indicate that nearly 5.5 million students took online classes in 2012. This number has increased to 7.1 million according to Babson Survey Research Group [1], [2]. This number is estimated to keep going up at a much faster pace. Teachers College, Columbia University CCRC (Community College Research Center) found based on their Washington State Community and Technical college study that completion rates in online courses were 5.5 percent lower than face-to-face courses [3]. They also found performance gaps that exist among students with lower GPAs to begin with [3]. This is not comforting news when you are considering creating online courses. However, determined to serve her students well, author decided to proceed with online course development. Queensborough student body, although largely underprepared, had another major issue, a vast majority of our students hail from countries all over the world and English is not their native language. According to Queensborough fact sheet [4], our total enrollment is 16,182 students. We have 30% Hispanic, 26% Black, 26% Asian, 18% White and 1% Native American. Over 44% report that they speak a language other than English at home. This is a big problem in biology courses. If a student is not fluent in the English language, it becomes really hard to understand biology textbooks. Some of these students can be really good in math and chemistry classes but struggle in biology courses because of language barriers. These students report difficulty understanding the

professor lecturing during class and taking notes. Also noteworthy is the fact that, because Queensborough is an open enrollment institution, over 20% of incoming freshman need remediation in reading and writing [4].

While there are excellent tutoring centers available to students, most of the students who need help, either do not go to tutoring because they do not have time due to work or family obligations or are just not comfortable seeking help due to cultural barriers. Whatever the reason, based on the student surveys collected, some of these students thrive in an online learning environment. Among the most frequently cited student quotes based on the surveys given were that an online learning environment provides them with the luxury of listening to a lecture multiple times, taking notes at their own pace, asking questions in the privacy of their own home and getting a prompt feedback from the professor or their peers. This can be a game changer for some.

It should be noted that this learning environment only works best for students who have a discipline approach for studying. Some students lack this discipline, therefore, an online learning environment can be really challenging for them. Some students report in the surveys that they thought the online class would be easy and if they had known that it was a hard class they would not have taken it online. It is clear that these students registered for the course under a wrong premise to begin with. Just because a course is online does not mean that the content it delivers has changed, it is the mode of delivery that has changed which is not suitable for every one. This way of thinking will change rather quickly as more incoming high school students come in with a lot of online learning experience. Most New York City high school students have textbooks that are online and homework that is assigned online. Therefore, the next generation is coming to colleges already prepared with online learning modalities and then taking either partially online courses or fully online courses would not be a culture shock to these students. As e-learning becomes more mainstream on campuses, it is rather critical for both educators and students to step back and learn from their new environment. It is thought that these new pedagogical tools can give students a real learning advantage. Not just good students, but especially students who struggle due to language barriers or cultural barriers that hold them back from a simple task of raising their hand in the classroom to ask a question.

John Orlando [5] mentions that an online environment creates a public environment where students are far more invested in their work compared to a traditional classroom. While Smith et al. think that in an online environment,

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students resist the urge to work in a group because they are used to working asynchronously [6]. For group projects, it is tried to ensure that all the students in the group are contributing their fair share to the project. The discussion board questions that were posed to the students were not something they would easily find the answer to in a textbook or searching online, rather, questions were interesting and something relevant to their daily lives and they had to think through to get to the answer. We agree with [7], that students learn a lot when the projects are driven by curiosity. It increases student retention and motivation.

One of the major concerns the author had before planning online courses was cheating. What if students just cheated their way through the course. According to [8], cheating rates are high on college campuses across the board for in person teaching and faculty rightfully worries about the unsupervised online environment. Major question on everyone's mind is that whether an online environment increases the cheating rates. Weimer's study [8] has found this is not the case. Grades were compared on timed exams in classrooms and compared to online courses. There was no evidence found that online environment increases cheating. Similar results were reported by [9]. When the course grades from semesters prior to online teaching were compared, there were not any significant differences seen in overall grading patterns. Author has adapted a flipped classroom approach in her partially online courses based on other studies [10].

II. PROBLEMS AND SOLUTIONS

Since QCC is an open admissions college, like most community colleges around the country, we suffer from lack of student preparation before they enter college. This lack of preparation is seen in high attrition rates in our entry level biology classes. Therefore, small class size is really important as it tries to reinforce the mentor mentee relationship. We also try to guide students to stay focused on their course work and more importantly teach them how to study at college level. Author decided to look into the fact if e-learning environment can help with the problems our students face.

A. Problems

The problems, mentors face, are:

- 1) Lack of student preparation at high school level,
- 2) Overall lack of student motivation,
- 3) Most students are pressed for time due to work and family obligations,
- 4) Low attendance rates for tutoring after class.

B. Solutions

The solutions can be offered in the e-learning environment are:

- 1) The teachers should offer online practice problems for pre and post lesson plan,
- 2) Working students can study at their own pace,
- 3) Online tutorials mean they do not have to be physically on campus for tutoring,
- 4) Most students prefer and are comfortable with online

modules for studying.

By implementing some of these known and pedagogically sound strategies, hopefully we will achieve student success that can be measured in student retention in online classes and passing with a grade of C or better.

III. LEARNING NEW STRATEGIES

CUNY provides Blackboard as our Classroom Management System. Thanks to both the CUNY wide winter institute followed by the Queensborough summer e-Learning institute, author was taken aback by the untapped potential of the Blackboard system. This platform had an enormous pedagogical potential and the author decided to implement it right away in an upper level Genetics course in the Fall 2011 and Spring 2012. In the years that followed, these strategies were later implemented in non-majors biology courses as well. The approach shared by Bill Plez in his 2004 article in *Journal of Asynchronous Learning Networks* is really worth implementing [11]. These new strategies were applied in Fall 2011 and in Spring 2012 partially online course:

- 1) Let the students do most of the work.
- 2) Online discussions should be led by students.
- 3) Let the students find the online sources related to the topic of the week and discuss it with the class.
- 4) Allow room for peer assistance and interject only if discussion is wrong.
- 5) Besides the class discussion, create group assignments for collaborative research projects.
- 6) Online student engagement is the key to success.
- 7) Online presence of the instructor is important to the group.

A. What Worked for Both, the Mentor and Students

For the upper level PNET genetics course, the course was broken down into weekly modules. Since it is a content driven course, it was important to divide the topics into weekly modules. By the end of each week students had to take an online quiz/homework. They got instant feedback from their quizzes, which allowed them enough time to study for the topics they needed help in and prepared them for the exam.

It was mandatory that all students participate in the weekly discussion board. The activities included students finding reliable resources on the topic at hand and post the links. They were supposed to critique the video/simulations.

Only if the students were going off topic they were corrected, otherwise it was really interesting how students would comment on each other's posts and even correct each other or advise them on how to study. Some of them even summarized the topics before exams and posted them on the discussion board to help their peers.

Since the course had an optional honors component, students were allowed to collaborate on a group project. A closed group of 3 to 4 students became part of a project within the blackboard environment. They could communicate all semester within their group and post links, summaries of the papers they would have to read pertaining to their honors project assignment. Close to the end of the semester, they

would have to make Power point presentations at an in house honors conference. This teaches students teamwork. It teaches students how to deal with different personalities, builds positive peer pressure where students have to do their share of the work as they don't want to let the team down.

B. Pleasant Surprise for the Mentor

The "Ice-beaker" activity on the discussion board posted the first week of class set the tone for the rest of the semester. It was gratifying that students shared so much professional and personal information the first day on the discussion board. Most of the students were really open about why they are taking this course, what they plan to accomplish, their immediate and their long-term career goals as well as the everyday challenges they face to be in school. It was a humbling experience. It was a new experience to see students being so open about themselves and eager to share so many details. It was equally astonishing when they started commenting on each others hardships and encouraging each other to stay in school to accomplish their goals.

C. What Did Not Work for the Mentor and Students

The group stayed enthusiastic for a few weeks and then the discussion board attendance started to slip. Students had to be constantly reminded to post on the discussion board and that this is considered attendance for the online component of the course and is mandatory and worth 5% of their grade. The discussion board activity would peak before the exams and dwindle otherwise.

Some students in the collaborative honors group project would not pick up their fair share of the work leaving the load of the project on others.

Not all students were satisfied with the weekly online homework assignments, some of them wanted the homework assignments to be more challenging.

IV. LESSONS LEARNT

It is realized that it is needed to make a rubric for the discussion board. Students need clear instructions about their presence and activity on discussion board. They should not think that it is an optional activity and therefore not an integral component of the course.

Although a collaborative honors group project rubric was provided to the students, it would need to be revised in order to make each individual more accountable in the group when they are part of a team. Another change to make moving forward would be to provide two sets of homework assignments, one for the entire class and another more challenging set, for students who want to do more.

V. DATA COLLECTED

The graphs that follow represent data collected from anonymous online survey with n=60. X-axis represent answer choices to the question asked and Y-axis represent percent of students. Students were asked a total of 10 questions in the survey. Data is presented from three questions asked, mainly the effectiveness of blackboard in their learning, if they

preferred submitting their writing assignments online or handwritten and if discussion board assignments were helpful. Other questions were open ended and asked for feedback from students about if they knew they were signing up for an online class, if they regretted signing up for an online class, if they preferred more in-person hours of the class and the feedback they would like to give their peers who will sign up for the class in the future. While most of them were delighted that they signed up for an online class, a few complained that the course was tough and that they would have preferred more in-person hours. Vast majority of them wanted their future peers to organize themselves ahead of time and pace themselves during the semester.

VI. CONCLUSIONS

As most of the data from the student surveys collected over two semesters suggests that our community college students responded really well to the first biology upper level PNET course. Most of the students liked the fact that they can review lecture material before they come to class or that this material is easily available for review even after the class.

How effective is the Blackboard in your learning in this course?

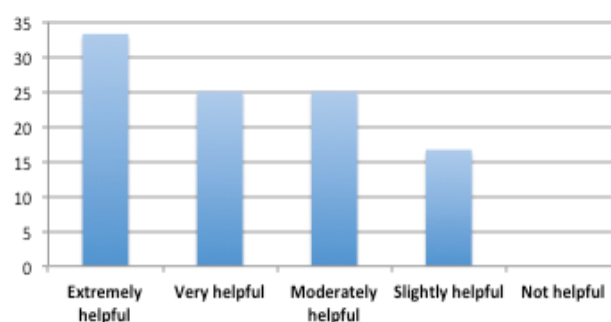


Fig. 1 Anonymous survey results from students about the effectiveness of blackboard in learning

Would you prefer hand written HW assignments or online assignments?

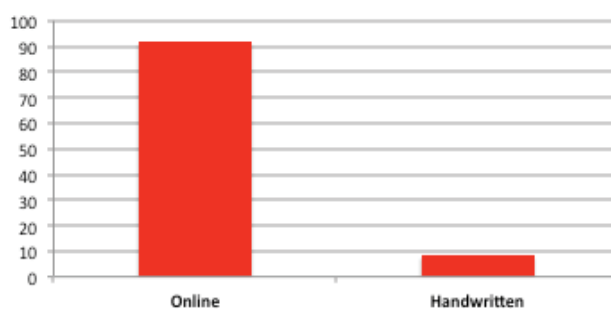


Fig. 2 Anonymous survey results from students about submission of homework assignments

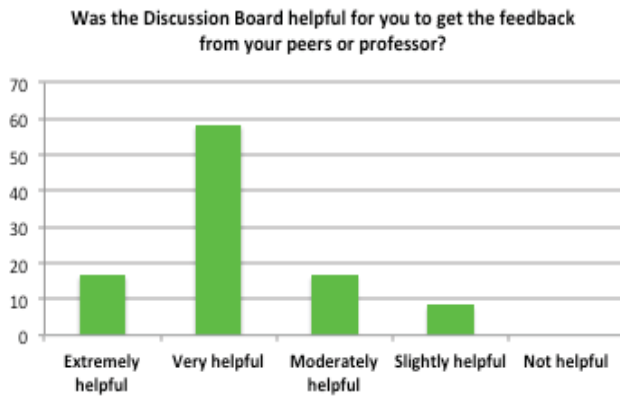


Fig. 3 Anonymous survey results from students about usefulness of Discussion Board assignments

They liked the idea that the discussion board was available for them to bounce the ideas off of other students. They felt comfortable posting comments on the discussion board. Any discussion topics that bothered them while they were reviewing their material was answered online rather than in person. They did not have to come on campus or wait for my office hours to ask questions. The discussion board became a peer led tutoring platform where the students who were doing well in the course took pride in helping their fellow students out. Some of the good students would frequently summarize the chapters or topics and post the chapter summaries on the discussion board for others to review. Author was pleasantly surprised that they would also correct each other.

The web presence was important to most of them and they knew that the instructor would respond quickly when they needed certain questions answered. Biggest challenge was to keep the discussion board flow constant throughout the semester. Discussion board got really busy the week before the exams and would slow down during other weeks. The fact that there were six lecture exams planned in a fifteen week semester meant that they needed to stay on top of their game all the time. However, the constant discussion board activity can be improved next time by adding a grading rubric to guide students through the importance of discussion board.

Due to the nature of overload on Blackboard site, some students would complain about not being able to log on to the site to complete their homework assignments on time. Students were given an entire week to complete the assignment therefore, there should be no reason to wait until the last minute to submit the assignments. Most of them learnt their lessons after the first week of class and there were rare instances of lack of submission thereafter.

Using the Safe Assign feature on the Blackboard helped safeguard against any potential plagiarism activity. Since the Genetics course was a Writing Intensive course, students need to submit their written assignments online which are checked for copy and paste content from website and a report is provide to the instructor and the student. Given the availability of the internet resources, our students need to be in full compliance with the plagiarism policy of the university which can be strictly reinforced with the help of Blackboard Safe

Assign feature. The next thing that author is working on implementing is good assessment tools for online learning environment [12]. Although students are given early semester and end of the semester surveys to complete, we will develop more tools for assessment of the impact that online courses are having in a community college learning environment.

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