The Evolution of Lesson Plans in a Hybrid Course: Flipping the Classroom and Engaging Students Through iPads and YouTube Videos

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Abstract

Instruction must include rigorous engagement in an online course. The increased popularity and use of social media tools have compelled instructors to incorporate them into instruction and learning. Due to many students using these tools, and, more specifically, YouTube, to interact and communicate with their friends, it can be an efficient way to unite students and instructors in higher education. This paper describes the design and implementation of lesson plans utilizing ipads, YouTube and peer discussions. Ultimately it is up to the professor to gauge, monitor and adjust instruction accordingly for the benefit of the students. Students can benefit from the strategy by having support throughout the process.

Keywords: iPads, YouTube video, hybrid course, flipping and lesson plans

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Introduction

Located in the South Bronx, the poorest congressional district in the country,

Hostos Community College enrolls approximately 7,237 students; 54.9% of the students

are enrolled full-time and the remainder (45.1%) are part-time. The demographic of

students includes 59% Hispanics, 22% African Americans, and 66% females. Of that

population, there are a substantial amount of English language learners (ELLs) (HCC,

2020). The ELL population has consistently increased over the past decades. Moreover,

recent statistics provide evidence that this United States population will most likely

continue to grow (Pereira & De Oliveira, 2015).   Finding ways to educate ELLs is an

increasingly important task, and educators in higher education are faced with the challenge

of creating and locating support tools and utilizing resources to provide for the linguistic

and academic needs of a diverse population (Zimmerman, 2014).

Over the years, the number of hybrid courses has increased from 50 in 2010 to 231

in 2018 (Wolfe, Lyons, & Guevara, p. 4). Moreover, there has been a steady increase of

online enrollment at Hostos since asynchronous and hybrid courses began being offered.

Even though online course offerings are increasing, it is important to keep in mind that the

role of the faculty member and student should not change (Ball & Forzani, 2009).

"Internationally, science, technology, engineering and mathematics (STEM) education is

regarded as critical to effectively

preparing citizens for the twenty-first century (Reynders et al., 2020, p. 10); Therefore, the

instruction of the educators in this area is even more critical.

Review of Literature

According to Guevara (2019) "supporting change in the culture of an organization has no beginning and no end point, especially when it comes to technological innovation; successful change requires continuous nurturing and motivating to establish and maintain an active community of practice" (p. 18). At this community college, there exists a culture of the enhancement of pedagogy, especially in hybrid and online courses.

Content instruction takes place outside of class time, while in-class time is devoted to conceptual interaction and practice, consistent with the concept of classroom flipping. This model acknowledges that most "technical mastery can occur with little direct interaction with an instructor and should therefore be de-emphasized in student-instructor encounters. Concurrently, conceptual development is facilitated with social interaction, whether with peers or an instructor, and this aught to be the focus of class time" (Maciejewski, 2015, p. 1). Most of the research has centered on instructor and student perceptions of flipping (Angelini & García-Carbonell, 2019) and instructor accounts of implementing a flipped classroom model (Sandanayake, 2019). The attitudes of students tend to be positive regarding flipped classrooms.

Due to a revolt by some instructors against lecturing, interest in classroom flipping is on the rise. Scholarship of Teaching and Learning (SOTL) emerged as a practitioner-led academic discipline, which focused on improving and understanding higher education (Platon, Caranica, & Catana, 2018). The literature in this field supports that students perform better when actively engaged in their studies. Moreover, this engagement can result from intrinsic motivation, but often requires support when it is developing. This kind of support has evolved into the form of non-traditional class time which is focused on

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student interaction (Maciejewski, 2015). Another aspect that contributed to the classroom flipping increase is the advanced, user friendly, and flexible technology. At the onset of the 2000s, almost all students owned at least one personal computer and a greater diversity of devices became available. Peripheral devices and software also saw an increase in a technology-savvy professoriate, which resulted in viable modes of classroom flipping (Maciejewski, 2015).

Flipped classrooms can include a variety of delivery modes, with a common feature being interactive engagement activities that are the focus of class time. Small-group or whole-class discussions can be the format presented, or technology-intensive peer instruction which involves personal response systems or clickers, among other methods. The effectiveness of interactive engagement methods has been proven effective in a variety of subjects (Zimmerman, 2014; Busaya & Wichadee, 2018).

Described as a "category-defining phenomenon," the iPad has considerable potential to improve teaching and learning (Widyasari, Nugroho, & Permanasari, 2019, p.16), yet there is an insufficient amount of empirical studies in higher education on the use of this device. It is further argued that more time is needed to distinguish "hype from hope" (Lemai, Barton, & Nguyen, 2015).

Designing Instruction

Course Design and Overview. EDU 111 Science and Mathematics for Young Children is a course that covers a wide spectrum of STEM topics for Early-Childhood Education students. In this course, students plan and organize Science and Math activities for young children. Students prepare materials, activities, and lessons used to present

introductory concepts to young children. A large portion of the course focuses on creating lesson plans that could be performed in an early-childhood classroom.

Timeline of Instruction. For at least a decade, I have discussed lesson plans in the course and encouraged students to create lesson plans for Mathematics and Science using a format that I provided. I would then review them and provide feedback. As students engaged in lesson-plan writing, common roadblocks were revealed that included, among others, writing a measurable objective, developing an engaging motivation, and linking the objective and evaluation. I then began conferencing with each student, but noticed something was still missing. Initially, I provided a sample lesson plan and exemplar model that students could follow. However, I noticed students were copying elements of the sample to obtain a good grade. The perceived attitude among students was that, if this was the approved standard, this must be what I was looking for in a lesson plan. Instruction was teacher-centered. Incorporating an aspect where students could relate to their peers was on the horizon.

Instead of teacher-student conferences, I began implementing peer conferences. Students utilized the sample lesson plan to review each other's plans. It was a low-stakes assignment before the final lesson plan (which was graded) was due. For the most part, students were more receptive to this because it was low-stakes and the feedback came from a peer. Yet, there remained students who were not as comfortable with the process. It was time to elevate the peer assessment to peer collaboration.

Students were encouraged to create lesson plans together if they so chose, or they could create them independently. iPads were the next ingredient on this journey of lesson plan development. Students were encouraged to perform the lesson plan and record

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themselves using an iPad. Viewing a written lesson plan on paper leaves the reader to imagine how the lesson would play out. However, acting out the lesson plan or even reading it aloud provided a different lens for students as they viewed the playback on iPads. Students engaged in self-reflection and self-evaluation. This assessment contributed to higher quality lesson plans, active learning, and an increase in student engagement.

Student Engagement. "Student engagement implies a learning environment where participants, drawn from diverse backgrounds, are actively engaged in a participatory culture and experience an adequately resourced and interactive approach to teaching" (MacFarlane, 2016, p.2). There is also an emotional element where students can relate to each other and their learning environment. Additionally, there is a cognitive element, which represents how students should construct their own learning and how to understand concepts more effectively (MacFarlane, 2016). The learning process and development of lesson plans became

more communal in the academic environment. The students were becoming more engaged and accountable for producing the lesson plans and activities. When students are more engaged as learners, they are more likely to complete their studies and obtain better degree results, and gain life skills suitable for the employment market, according to Platon, Caranica, & Catana (2018).

Research has shown the role of technologies, in particular in hybrid and online forms of teaching and learning, is critical for student engagement and active learning in today's higher education learning environments (Wanner, 2015). Due to new technologies such as wikis, e-Portfolios, blogs, and social media, there are a variety of ways to motivate and assist students in engaging with course content, instructors, and colleagues. The "Net

Geners" [Generation] of students want flexibly delivered learning, relevant coursework and interaction from learning technology and technology-enhanced learning (Wanner, 2015).

Facilitation of Teaching and Learning Using Social Media

Since a tendency toward the decline in formal education, the use of social media for teaching and learning in higher education has gained importance, (Platon, Caranica, & Catana, 2018). In fact, using social media for instruction and acquisition can prove to be an adequate way of connecting students and teachers since it presents diverse and socially engaging educational experiences for both sides. Social media are "a precise set of dedicated platforms, applications and services that facilitate social interaction among virtual users and are rooted in conversations, engagement and participation" (Wanner, 2015, p. 10).

Teachers and students are enabled to develop an innovative and different virtual learning process based on interaction and collaboration through the afore-mentioned benefits of social media Platon, Caranica, & Catana (2018). Instruction and acquisition via social media is not meant to replace traditional learning, but offer a complementary alternative. Instructors are able "to look to technology to mediate and enhance their instruction as well as promote active learning for students" (Macfarlane, 2016, p. 841).

The Appeal of Media. The use of video in higher education is increasing steadily and is expected to continue. Faculty are including more videos in their courses as a way of enhancing understanding, informing discussion, and bridging the generational divide that can mark both student and faculty relationships and media fluency (Otto, 2014).

Using YouTube and iPads in Class. The importance of online teaching videos as educational resources has increased and has been studied by the research community.

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According to Liao (2012), "short videos seem to maintain students' attention better", p. 62. Assigning brief YouTube videos based on the concepts we were studying was how I began the exploration of social media in the classroom. Students were able to view educators reading stories, conducting science experiments, using math manipulatives, and more via YouTube. Also keeping brevity in mind, I created a 6 minute YouTube video of myself executing the sample lesson plan that students were using as a guide. It was a way for students to see the lesson plan come to life. This was a lesson plan that was familiar to them, so it was received better than a new lesson. Additionally, it set the stage for them to accomplish the same task.

Students were provided iPads to utilize for recording purposes. In small groups, students recorded each other performing lesson plans they created. They were able to view their strengths and areas that required improvement. For example, some students noted that they did well projecting, whereas others noticed that they needed to speak up a little more. Eye contact was something else that was a bit challenging for some students while reading their lesson plans. Due to this activity, students realized that rehearsing their lessons before they were scheduled to be recorded by colleagues was best. In watching the videos, they were able to see when lesson plan aspects needed more detail. It was different putting a lesson on paper versus physically acting it out. When developing a lesson plan, it is being developed with the intention that anyone can pick up the lesson and execute it. Students were finding that was not the case when they reviewed themselves or even their colleagues. Overall, students recording each other helped them with their overall delivery and composition of lesson plans.

Suggestions for Implementation for Educators

Based on the author's informal observations of lesson plan writing and execution in this article, an outline for implementation of any general strategy in a higher-education classroom is suggested as follows:

Table 1.1

Conference Implementation Supported by Technology

Phase One--Guide, Observe and Analyze	
1. Establish a universal format for your particular course.	This is to ensure that both you and the students agree and fully understand all elements before beginning formal work on the assignment and/or strategy.
2. Provide scaffolding for an assignment.	Support the students by doing it with them and/or providing it in stages.
Check in with the students via one-to-one conferences or a whole-class discussion on the assignment. During the discussion, analyze student feedback, common errors and challenges. Depending on the feedback, repeat step two with a similar assignment, or proceed to the second phase.	
Phase Two--Guidance, Peer and Technology Support	
3. Discuss the value of peer feedback and explain how it will be executed in the course.	Gaining insight from a peer who is in the same boat as them is a different perspective than that of the professor. Many times, students respect the point of view of a peer versus the professor who is making corrections to their work.
4. Provide a similar assignment and monitor and observe.	
5. Introduce technology and explain how it will be executed in the course.	Using an iPad or other media instrument can support peer-professor feedback. A student can see first-hand the error in real time.

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6. Reflect on the process and lessons learned.	Students can create a journal to document the process and discuss their growth in the strategy.

Benefits & Potential Outcomes

This process is beneficial to both the instructor and students. The professor can gain insight through observation of their current class. The dynamics and learning styles of students change from semester to semester. In some cases personal conferences may work better

Conclusion

YouTube is increasingly used for teaching and learning. When appropriately incorporated in the classroom and in out-of-classroom contexts, it can improve the effectiveness and quality of teaching and learning (Chintalapati & Daruri, 2017). By encouraging students to create, share, and comment on learning-focused videos, YouTube engages students in creative and collaborative learning of a constructive nature (Jung & Lee, 2015). The use of the iPad provided convenience for the students and a larger canvas to review and record. Some students were more comfortable with their personal smart phones and used them in some cases (especially when creating their own YouTube videos); however, the majority utilized the iPad because of the size.

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