A MOOC Camp-Based Flipped Classroom:
Integrating MOOCs into University Curriculum

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Abstract: Massive Open Online Courses (MOOCs) are dramatically breaking borders and barriers to teaching and learning as they democratize access to quality international education for teachers and students across the globe. MOOC Camps provide an alternative framework to using MOOCs in the classroom aimed at fostering collaborative learning and engagement among participants. Utilizing a descriptive survey design, this study explored the affordances of integrating MOOC Camps into a flipped classroom. For five weeks during the first semester of the academic year 2018-2019, 1057 freshman students in a private university in Manila, the Philippines participated in MOOC Camps integrated into flipped classes. The students took English for Career Development, a MOOC developed by the University of Pennsylvania, funded by the U.S. Department of State, offered through the Regional English Language Officer (RELO) of the U.S. Embassy in the Philippines, and accessed through Coursera as a MOOC platform. Research data drawn from surveys and individual reflections from 711 respondents showed students' high satisfaction rates on the MOOC's aspects such as module topics, presentation of the course content, variety of activities, inter alia. The data also revealed students' positive insights on the use of MOOCs in the flipped classroom citing benefits such as meaningful learning experience, opportunities to create personal learning environments, among others. Pedagogical implications are offered in the light of these findings.

Key Words:

1. INTRODUCTION

1.1 Background of the study

Since the inception of *CCK08: Connectivism and Connected Knowledge*, a massive open online course (MOOC) that was designed and facilitated by George Siemens and Stephen Downes in 2008, offered to 25 tuition-paying students at the University of Manitoba and participated in at the same time by over 2200 students from the different parts of the world at no cost and without earning any credit (Educause, 2011; Decker, 2014; Lowe, 2014), the 'digital revolution' in education (Brabon, 2014, p.1) was born. Since then, global education leaders, policy

makers, field practitioners, and researchers have turned their gaze to the potentials of MOOCs in reimagining how knowledge can be communicated via this modern platform and in investigating whether MOOCs provide sound instructional design leading to quality outcomes and experiences for the students (Hayes, 2015). MOOC has become 2012's buzzword in higher education (Daniel, 2012 in Chen, 2014). David Willetts, former U.K. Universities and Science Minister once heralded MOOCs as "the opportunity to widen access to our world-class universities and to meet the global demand for higher education" (Wintrup, Wakefield, & Davis, 2015, p. 6). Billington and Fromueller (2013) and

Dyer (2014) stated in Israel (2015) that MOOC is a disruptive innovation to bring reform in higher education.

The MOOC movement in educational landscape was picked up by various institutions and they started establishing MOOC platforms in collaboration with various field experts and organizations. Some of the most notable MOOC providers in the world include the following: *Udacity (www.udacity.com)*, founded in June 2011 by Sebastian Thrun, David Stavens, and Mike Sokolsky and launched in February 2012; *Coursera (www.coursera.org)*, founded by Andrew Ng and Daphne Koller and launched in April 2012; *edX (www.edx.org)*, created by scientists from Harvard University and Massachusetts Institute of Technology (MIT) and launched in May 2012; *Canvas Network (www.canvas.net)*, launched in November 2012 by Instructure which was founded by Brian Whitmer and Devlin Daley in 2008; *Open2Study (www.open2study.com)*, launched in April 2013 by Open Universities Australia; and *Iversity (www.iversity.org)*, created by Jonas Liepmann and Hannes Klöpper and launched in October 2013.

MOOCs gained both appraisals and criticisms. Opinions about MOOCs are divided about their value and importance. MOOCs are seen as 'significant catalysts' in education (Bayne & Ross, 2014), as 'an innovation with great potential to widen participation and promote lifelong learning' (QAA, 2014), and as a 'recent stage in open education' (Creelman, Ehlers, & Ossiannilsson, 2014). On the other hand, MOOCs are viewed as 'disruptive technology' (Christensen, 2010), as merely a 'marketing exercise' (Conole, 2013), and as a 'lousy product' (Thrun, 2013). And in places like Harvard, several liberal arts professors have been protesting "the rush to embrace MOOCs, which they worry will undermine the personal, intellectual connection inherent to a liberal arts education" (Carr, 2013, p. 2 in Johnson, 2013). Nevertheless, Creelman et al. (2014) emphasize that 'MOOCs present the possibility of new approaches to education,' and Wintrup et al. (2015) suggest three key areas for

further research on MOOCs: education enhancement focusing on curriculum developers and learners, higher education providers and their marketing teams, and researchers and policy makers.

The pedagogy underpinning MOOCs is informed by connectivist views of learning, which posit "that knowledge is distributed and learning is the process of navigating, growing, and pruning connections" (Siemens, 2012). Driscoll (2000, p. 11, in Siemens, 2004) defines learning as "a persisting change in human performance or performance potential…[which] must come about as a result of the learner's experience and interaction with the world." In describing the nature of learning in the digital age, which is characterized by network connections, small worlds and ties, George Siemens (2004) proposed a new model of learning which he called "Connectivism".

Connectivism is the integration of principles explored by chaos, network, and complexity and self-organization theories. Learning is a process that occurs within nebulous environments of shifting core elements – not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or database), is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing. (George Siemens, 2004).

Siemens (2005 in Holotescu, 2015) further states that in Connectivism, "knowledge is distributed across a network of connections, and therefore learning consists of the ability to construct and traverse those networks"; knowledge is "the set of connections formed by actions and experience." "Connectivism is built on an assumption of a constructivist model of learning, with the learner at the centre, connecting and constructing knowledge in a context that includes not only external networks and groups but also his or her own histories and predilections" (Anderson and Dron, 2011 in Holotescu, 2015).

Although MOOCs are commonly designed and delivered as independent or stand-alone courses, several studies have already explored MOOC integration into university classes (Bruff, 2012; Koller, 2012; Bruff et al., 2013; Caulfield et al., 2013; Firmin et al., 2014; Griffiths et al., 2014; Holotescu et al., 2014), indicating the possibility of utilizing MOOC elements in delivering course content as a form of blended learning approach with the aim of enhancing student learning experiences. According to Koller (2012 in Israel, 2015), MOOCs offer opportunities to wrap on-campus courses around existing MOOCs. Integrating MOOCs via blended learning or hybrid format may improve student outcomes and reduce costs (Griffiths, 2014 in Israel, 2015). The approach of integrating MOOCs into face-to-face classes has been referred to as "distributed flip" (Caulfield et al., 2013) or blended / hybrid model (Bruff et al., 2013; Griffiths et al., 2014; Holotescu et al., 2014).

According to Clayton Christensen Institute (2015), blended learning is a formal education program in which a student learns (1) at least in part through online learning, with some element of student control over time, place, path, and/or pace; (2) at least in part in a supervised brick-and-mortar location away from home; and (3) the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience. Horn and Staker (2014) present blended learning models that usually comprise blended-learning programs: *rotation, flex, a la carte*, and *enriched virtual*. The rotation model includes four sub-models: *station rotation, lab rotation, flipped classroom*, and *individual rotation*. Blended learning mixes face-to-face/in-class activities with online/outside-class activities with the integration of synchronous and asynchronous learning tools (Holotescu et al., 2007; Andone & Vasiu, 2012; Naaji et al., 2013 in Holotescu et al., 2014). Garrison and Vaughan (2008 in Israel, 2015) described the basic principle of blended or hybrid learning as, "face-to-face oral communication and online written

communication are optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended learning purpose" (p. 5).

This study utilized blended learning model by integrating a MOOC into the classroom is informed by Matthew Koehler and Punya Mishra's (2009) Technological Pedagogical and Content Knowledge (TPACK) Framework, which underpins the complex interplay and interconnections of the three primary forms of knowledge – Content (C), Pedagogy (P), and Technology – that results in the following intersections: Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and Technological Pedagogical Content Knowledge (TPCK). TPACK guides this study in developing sensitivity to the dynamic and transactional relationship among all three components and in flexibly navigating the spaces defined by these key elements in the utilization of MOOC in the class. Koehler and Mishra (2009) suggest that educators should go beyond the "functional fixedness" of technology and innovate to make it pedagogically viable.

Drawing from the foregoing discussion on the pedagogical potential of integrating MOOCs into the traditional classroom setting, this study investigated the viability of the approach in an English as a second language (ESL) classroom context in a private university in the Philippines, adapting the principles of Horn and Staker's (2014) flex model of blended learning and using Coursera (www.coursera.org) as the MOOC platform. While there has been a deluge on MOOC research in western parts of the world particularly North America and Europe (Veletsianos & Shepherdson, 2016), MOOC studies in Asia especially in the Philippines remain to be sparse if not scarce. Furthermore, MOOC research has primarily focused on the needs and perspectives of the greater public (de Waard, 2011; Byerly, 2012; Carey, 2012; Lewin, 2012), the perspectives of faculty and administration (Parry, 2010; Chamberlain & Parish, 2011; Duneier,

2012; Marklein, 2012), yet attention seldom turns to actual users of MOOCs (Cole & Timmerman, 2015) making "learners' voice to be largely absent in the literature" (Veletsianos & Shepherdson, 2016). Hence, this study aims to explore student MOOCers' experiences, as well as the applicability, suitability, and viability of MOOCs in the Philippine ESL context.

1.2 Research Questions

This study aimed to answer the following questions:

1. What are the students' satisfaction levels of the MOOC's components based on their experience?
2. What are the students' perceived benefits from taking the MOOC?
3. What are the students' attitudes on learning in a flipped classroom with MOOC integration?

2. METHODOLOGY

For five weeks, 1200 students who were enrolled in a Purposive Communication subject in a private university in Manila, the Philippines took a massive open online course (MOOC) titled "English for Career Development" during the first semester of the academic year 2018-2019 from September to October. Students took this course outside of class on their free time, while they participated in application activities about the course modules' concepts in the classroom. This course was developed by University of Pennsylvania, sponsored by the U.S. Department of State under their English Language Programs and offered through the Regional English Language Office of the U.S. Embassy in Manila, the Philippines. Research data was drawn through survey method which was administered to the participants via an online survey. The survey questions included the following: participants' profile, background knowledge on MOOCs, internet access profile, experience about

learning with a MOOC, experience about the MOOC Camp, and perceptions about the flipped classroom based on their learning experience. The online survey was created through Google Form, and the survey link was posted in each of the classes' Facebook groups for student access. Online surveys are becoming popular as more segments of society are using the Internet for communication and information (Fox et al., 2001; Nie et al., 2002). Doing an online survey allows the researchers to reach out to the participants easily (Garton, Haythornthwaite, & Wellman, 1999), helps them save time and access important features such as email response notification, real time tracking of item responses, and basic data analysis (Wright, 2005).

3. RESULTS AND DISCUSSION

Students took an online course for five weeks and participated in the classroom activities and discussions focusing on the course's modules. They accessed University of Pennsylvania's five-week course on "English for Career Development" via Coursera (www.coursera.org) using their internet-connected devices such as desktop, laptop, tablet or mobile phone. They accessed the course and completed the five modules by watching video lectures, answering online quizzes, submitting online assignments, and doing online peer feedback. In the class, students participated in the classroom activities which aimed at processing the key concepts in the course's modules. The course has five modules which include the following: Module 1 – Entering the job market, Module 2 – Resumes, Module 3 – Writing a cover letter, Module 4 – Networking, and Module 5 – Interviewing for a Job. Following the tenets of the flipped learning approach, there were no lectures about the course modules in the class anymore. Instead, application activities were designed to engage the students and to provide them opportunities to apply their learning from the modules. Activities in the class included

workshop-type tasks such making a resume and cover letter, creating and delivering elevator speeches for a networking activity, and job interview simulation.

After taking the MOOC, students were asked to indicate their satisfaction levels of the MOOC's aspects such as the module topics, presentation of the course content, variety of activities, directions provided, and length of course. As regards the module topics, 78% (n=554) were indicated extremely satisfied, 21% (n=150) satisfied, and 0.7% (n=5) neither satisfied nor dissatisfied. Students reported that the module topics provided them a complete picture of the job search process and equipped them with the necessary knowledge to prepare for a successful job hunt. In terms of the presentation of the course content, 78% (n=554) indicated extremely satisfied, 21% (n=150) satisfied, and 0.7% (n=5) neither satisfied nor dissatisfied. Students were generally satisfied with the course format of providing video lectures with transcripts, online quizzes and assignments, and peer feedback mechanism. As regards variety of activities, 75% (n=535) indicated extremely satisfied, 23% (n=166) satisfied, and 1.3% (n=9) neither satisfied nor dissatisfied. MOOC's activities included reading online articles, watching short video lectures, participating in the online discussion board, taking online quizzes, accomplishing weekly assignments, and rating classmates' outputs. In terms of directions provided by the online instructors, 75% (n=536) indicated extremely satisfied, 23.7% (n=168) satisfied, and 0.8% (n=6) neither satisfied nor dissatisfied. Students reported that the instructions provided were simple, clear and straightforward. They did not have a hard time understanding and following the instructions in the lessons and in the activities. Finally, as regards the length of the course, 75% (n=529) indicated extremely satisfied, 23% (n=165) satisfied and 2% (n=15) neither satisfied nor dissatisfied. Generally, students were satisfied about the course length which was five weeks, as it was not too long or too short. Besides, it

was enough to be covered in the midterm period during the semester.

When students were asked about how they felt the course has improved their knowledge and skills related to the job search process, which was the focus of the five-week course, they responded positively. Figure 1 shows that of the 711 responses, 59.2% (n=421) stated that they were very much improved; 38.7% (n=275) indicated that they improved, while 2% (n=14) reported that they somewhat improved. Students reported that the modules are well-designed with straightforward lessons that are easy to follow and understand. Furthermore, students shared that the weekly modules are relevant to their need because the modules helped them familiarize with the job search process as well as equipped them with significant skills needed in the workplace and in the corporate world. They learned about the job-hunt process, how to write an effective resume and cover letter, how to create and deliver an elevator speech, and how to prepare for the job interview and how to respond effectively to the job interview questions.
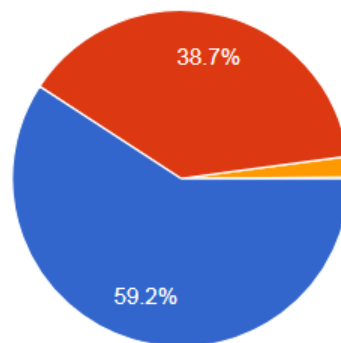

Figure 1. Students' perceived improvement on their knowledge and skills after taking the course

When students were asked if they liked the idea of taking the MOOC online and doing application and collaborative activities with their classmates in the class, they responded positively. Of the 711 responses, 99% (n=704) shared that they liked it, while only 1% (n=7)

stated that they didn't like it. Some reasons mentioned for the positive response include the following: accessibility of the course modules anytime and anywhere, availability of replay button in the online video lectures, and opportunity to manage their own learning, among others.

To determine students' attitude towards flipped classroom using a MOOC, they were asked to describe their overall experience in one adjective. The words were used to generate a word cloud. Figure 1 shows the word cloud that reflects students' attitude about their learning experience.

Figure 2. Word cloud showing students' attitudes on flipped classroom with MOOC

Generally, students showed positive attitude towards flipped learning. The words such as "amazing", "awesome", "informative", "great", and "helpful" all indicate that students favored this new learning experience. When asked why they responded such, students reported that the flipped classroom setup helped them to be in control of their own learning, allowed them to make use of their mobile phones for educational purposes, and provided them opportunities to explore new learning opportunities. Finally, when students were asked whether they would recommend other students to take a MOOC in a flipped

classroom, 99.4% (n=707) responded 'Yes' while 0.6% (n=4) answered 'No'.

The data revealed students' levels of satisfaction about the MOOC's components, their perceived benefits from taking a MOOC and their attitudes towards taking a MOOC in a flipped classroom setup. The students reported a general satisfaction about the course format which uses technology in the delivery of the course content, allowing them to access the course anytime and anywhere. In particular, students highlighted that the availability of short video lectures that run for approximately 5-8 minutes provided them an opportunity to learn even beyond the confines of the physical classroom, just by using their internet-ready devices. This corroborates the findings of Cho and Byun's (2017) similar study which also found students' preference for video style in lecture delivery because it gave them opportunity to pause or replay a lecture whenever they feel the need to. These videos, according to Herreid and Schiller (2013) do not only maintain students' attention and enable to concentrate on the content, they also ensure active participation and student-centered learning.

The hybrid format of learning that the students experienced underscores the tenets of flipped learning model (Horn & Staker, 2014), which encompasses a direct instruction delivered to individual students outside of the class, and more strategic use of in-class time for group work and individualized attention by allowing students to access the video lectures on their own time, pace and space and participate in in-class activities applying the concepts learned from the video lectures. This flipped learning setup can engage students in the application-oriented learning activities and let them apply the theoretical knowledge (FLN, 2014) that they gained from the MOOC's video lectures through engaging classroom tasks. Furthermore, it echoes Sun and Wu's (2016) findings that flipped learning provides more teacher-student interactions and facilitates more collaborative and interactive activities

among the students, thus increasing student engagement and fostering more motivation and achievement (Zainuddin & Halili, 2016).

Students' highly positive response about the perceived benefits that they gained from taking the MOOC's modules coupled with the in-class application activities can also be attributed to the effective course design by the course developers. With a relevant course designed for learners preparing for the workplace by a top-rank global institution like University of Pennsylvania, the course attracts engagement and interest. It augments the classroom and students' learning, without the teachers or the university's expense of building or managing a MOOC (Murphy, Tracey, & Horton-Tognazzini, 2016). The quality of the modules delivered in a technology-driven mode helped facilitate engagement among the students by "relating, creating, and donating" (Kearsley & Schnederman, 1998). The students in this study performed 'Relating' by interacting with their classmates online and learning from one another. They accomplished 'Creating' by applying the ideas that they gained from the course's modules to a specific context such as creating their own resumes and cover letters and participating in a job interview simulation in the classroom. Finally, the students were able to do 'Donating' by transferring their learning from the course's modules into authentic learning environment that has strong connections to the real world. For example, students were asked to perform a job search in a real jobs database in the Philippines and create their resume by matching their skills and credentials with the job description of their target job. They also created and delivered their elevator speeches in a networking activity in the class, which ensured active learning and student engagement.

Finally, the students' positive attitude towards their flipped classroom experience with MOOC integration reveals a promising alternative platform for learning among students. The words "amazing", "awesome", "excellent", "interactive", and "helpful" speak

volumes about the possibilities of incorporating MOOCs into the traditional face-to-face classroom setup, and transforming the classroom into a 21st century learning space where students hold more accountability of their learning, where pace and space no longer disrupt students' learning progress, and where education is more open in welcoming, embracing and harnessing the powers and the promise of modern technology.

4. CONCLUSIONS

Teaching with technology in this Era of FIRe (Fourth Industrial Revolution) is gradually becoming a *sine qua non.* As the initial findings of this study revealed, many students believed that hybrid learning such as flipped learning with the integration of a massive open online course (MOOC) could provide them a new learning experience and opportunity, which would cater to their tech-savvy lifestyle. This implicates the 21st century educators' pedagogy to revisit and rethink their approaches and to be open to innovations which could transform their classroom and their students' learning outcomes.

5. ACKNOWLEDGMENTS

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