Milking the MOOCs: Blending it Right for Meaningful Flipped Learning

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Milking the MOOCs: Blending it Right for Meaningful Flipped Learning

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Introduction

Massive Open Online Course (MOOC) has undergone tremendous changes within a short period of time. Its vast potentials in transforming learning and even the name itself have been scrutinised and debated by various researchers and educationists, so much so that it has created its own ecology for learning that Decker (2014) coined as "MOOCology". In its humble yet impactful beginning in 2008, MOOC focused on its massiveness and openness. Massive refers to the capability of allowing thousands of students to enrol while open refers to free and open access to anyone regardless of their prior learning (Decker, 2014). Dave Cormier coined the term MOOC after seeing the success of George Siemens' and Stephen Downes' course on Connectivism and Connected Knowledge in 2008, luring 2,300 students who took the course for free (Downes, 2008). However, both Siemen and Downes credited the concept of free open online courses to David Wiley and Alec Couros who developed their wiki-based free courses in 2007. By 2012, various MOOCs mushroomed thanks to the introduction of MIT OpenCourseware, Coursera and edX.

The sudden introduction of MOOCs has offered a lot of excitement particularly in leveraging ICT technology for free education to the masses. Malaysia is also jumping on the bandwagon by including MOOC in the Malaysia Education Blueprint 2015-2025 (Higher Education). Of late, however, findings from various research have suggested MOOCs to be another educational fad that are diverting from its initial goal. MOOCs were originally conceived as participatory environments, which allow collective sharing of self-created learning content among learners (McAuley, Stewart, Siemens, & Cormier, 2010). This approach to MOOCs was seen as more sustainable than commercial or top-down based platforms. In such an approach, learner participation and engagement are seen as the key factors in encouraging a more fruitful learning experience.

Although MOOCs have provided an avenue for learners to learn at their own pace virtually, learners' engagement on the content created within the MOOC platform is reported to be drastically low. For example, Daniel (2012) reported an MIT Circuits and Electronics MOOC, which started with 155,000 enrolled students, had 23,000 attempting the first problem (14.8%) and only 7,157 (4.6% of registered) completing the course. This trend is apparent across a range of courses offered across the globe including emerging MOOC providers in Asia Pacific regions like Malaysia and Singapore. In fact, over dependency on pre-recorded video lectures in MOOCs is now a cause for concern, to the extent that Duke Professor Cathy Davidson has called the current implementation of MOOCs as "taking the lecture - the most traditional form of education-and motorizing it" (Bonnett, 2013, para 27). Kop (2011) echoed the same sentiment by highlighting the need for MOOCs to pay close attention to social presence (interactions) of the facilitators and of participants.

In view of the need to improve learners' engagement, this article outlines several useful suggestions in integrating face-to-face lectures with MOOC contents, which can be taken from various platforms including MOOCs produced by Universiti Malaysia Sarawak.

Flipped Learning

A "flipped classroom" or "flipped learning" approach (Baker, 2000) is accepted as a 21st century teaching approach that promotes active learning and gives more weight to classroom activities than merely one-way lectures. Flipped learning approach allows active student engagement by using materials such as problem-solving task, case studies, and practical activities. Students are encouraged to engage with lecture materials (usually in the form of videos) or explanations (in the form of guided notes) before class, while the class time is maximised for in-class activities and discussions. Miller (2012) stipulated that the flipped learning approach fosters the 'guide by the side' mentality among the teachers, rather than that of the 'sage on the stage', and it cultivates a classroom culture of knowledge construction. Besides, Barrett (2012) mentioned that the approach has proven to

increase students' motivation since they are more eager to learn when classroom activities are aligned to the learning outcomes. In terms of empirical findings, Knight and Wood (2005) have reported a marked increase in academic performance when flipped learning approach was adopted in their biology classes. Wong and Chu (2014) also indicated positive outcomes from the use of flipped learning approach in the teaching of English language, as more time is devoted into active language learning strategies. Regardless of class size, this approach has seen fruitful results in different fields of learning (Herreid & Schiller, 2013; Zappe, Leicht, Messner, Litzinger, & Lee, 2009).

Clearly, flipped learning, which is also part of blended learning, offers a fresh perspective on how classroom time is used to maximise learning instead of spending hours mainly for lecturing. In order to capitalise on this approach, lecturers can make use of existing MOOC content and blend it according to existing course syllabus.

Blending MOOC Content for Flipped Learning

There are many MOOC platforms that are offering free content, which can be used for blended learning instead of requiring the students to follow the whole MOOC from the very beginning. Besides, blending the MOOC content within the existing course official e-learning page (e.g. on UNIMAS Morpheus) gives lecturers more sense of belonging and autonomy rather than being restricted to what is specified on the MOOC page. However, in doing so, lecturers should strategically design the course activities, in accordance to the learning outcomes and not merely following the "mosaic method" of combining content from various sources.

The following section proposes several "blending" methods that can be considered in the three stages of lesson design, namely pre-class, in-class and post-class. This would help to design a more meaningful flipped learning experience for the students as well as the lecturers.

Pre-class Activities

Prior to conducting the class, lecturers can make use of the MOOC content to activate their students' schemata (previous knowledge) on the topic to be covered besides preparing them for the key topics to be discussed in class.

MOOC Videos of Schemata Activation

Almost all MOOCs contain videos that can be used in blended mode. Identify the suitable ones by checking at least two factors: i) suitability of the topic and ii) the duration of the video. Pre-class videos should not exceed 10 minutes, in fact it would be good to pick those that are specific in nature and are less than 5 minutes. Questions or tasks should accompany the videos, so that it would be

easier to identify students who ds not watch the assigned videos besides giving a meaningful purpose for watching. The questions can either be in the form of open-ended questions asked via forum or in the form of multiple-choice questions asked via the quiz tool. Figure 1 shows an example of how a MOOC video taken from UNIMAS MOOC on OpenLearning.com is integrated into the Morpheus page.
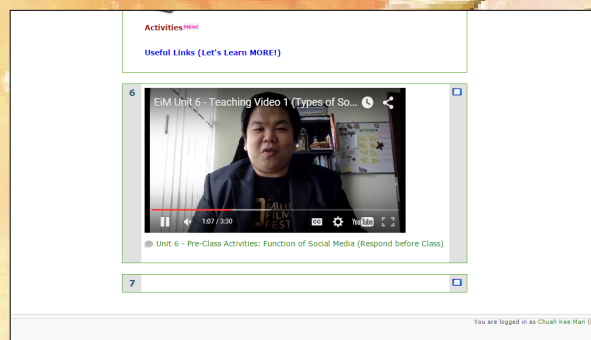

Figure 1. MOOC videos used as part of pre-class activity. Videos from other MOOC platforms can also be used as long as they are integrated with the tasks provided.

MOOC Activity as Warm-Up Tasks

Some MOOC platforms offer very engaging and useful warm-up tasks that can also be used as part of the pre-class activities. For example, before going to a specific topic in "*Engineering Mathematics*", the lecturers can test students' math level by requiring them to participate in the relevant MOOC, such as the one illustrated in Figure 2, which is an introductory course offered at KhanAcademy. KhanAcademy has a great number of activities that are appropriate for such purpose. Students do not have to go through the whole MOOC if they do not want to, but at least they are provided with a pre-class activity that can
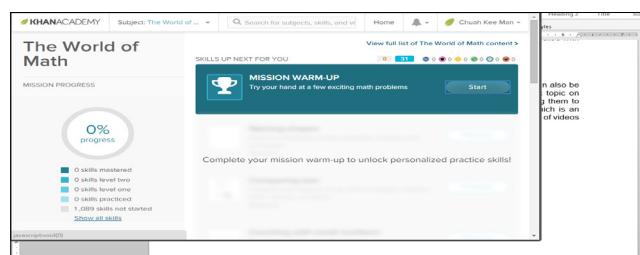

Figure 2. Activity in KhanAcademy that can be used as pre-class warm-up

set the stage for what is expected of them in the class.

In-class Activities

In-class activities in the traditional classroom is dominantly lecture-based. However, for meaningful flipped learning, only 30% of the class time should be spent for lecturing. Thus, in a typical three-hour lecture, only about one

hour should be used for lecturing. The remaining two hours should be filled with purposeful activities that allow learners to demonstrate better understanding on the content covered. After all, they would not be paying attention to non-stop lecturing for two or three hours anyway. For the in-class activities, the lecturers should first allocate enough time to discuss what has been covered in the pre-class activities. Students' responses should be highlighted especially when students are having problem to grasp the fundamental knowledge for the course. In addition, some relevant activities outlined in MOOC platform can also be used. Figure 3 shows how an existing task in MOOC can be used for in-class discussion. In fact, lecturers would be able to compile a huge number of activities, which are shared on MOOC platform and

Figure 3. Existing activity in MOOC that can be integrated

integrate them in their lesson design.

Post-class Activities

To further enhance students' understanding on what has been covered in class, self-assessments provided on MOOCs can be used as post-class activities. Instead of spending time coming up with a different set of questions or tasks, lecturers can select those relevant quizzes or assessments (e.g., Figure 4) on MOOCs and link them into their course page.

Figure 4. Quizzes from a MOOC offered in Coursera

Since most quizzes are automatically assessed, there is less hassle for lecturers to complete the tedious marking process particularly when the class size is huge. Students can be instructed to take a screenshot of their scores and upload on the e-learning platform (e.g., forum or assignment submission). This would provide an opportunity for the lecturers to monitor their progress and identify their weaknesses as well.

Conclusion

While MOOCs are meant to be standalone courses in which learners can enroll on their own, many of the content offered within the MOOCs platform can be integrated for flipped learning. This is particularly useful when faculty members are more inclined to adopt a blended mode in their teaching and learning activities. Instead of rigidly follow the schedule outlined in a specific MOOC, lecturers can design their lessons by incorporating the digital content, which are noted to be appropriate and in line with the course learning outcomes. However, lecturers should select only contents that are marked as Creative Commons (or open-source) so as to avoid copyright infringement issues. Another challenge is cultural difference whereby some MOOC contents are biased to a specific culture and not suitable to be used in Malaysian context. Hence, careful considerations should be taken by the lecturers prior to selecting a particular MOOC content.
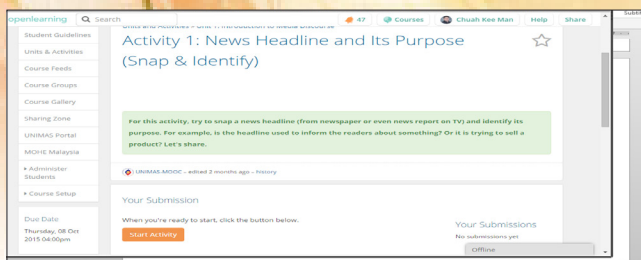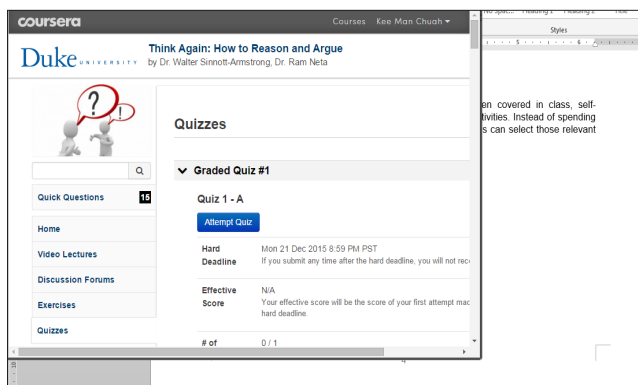
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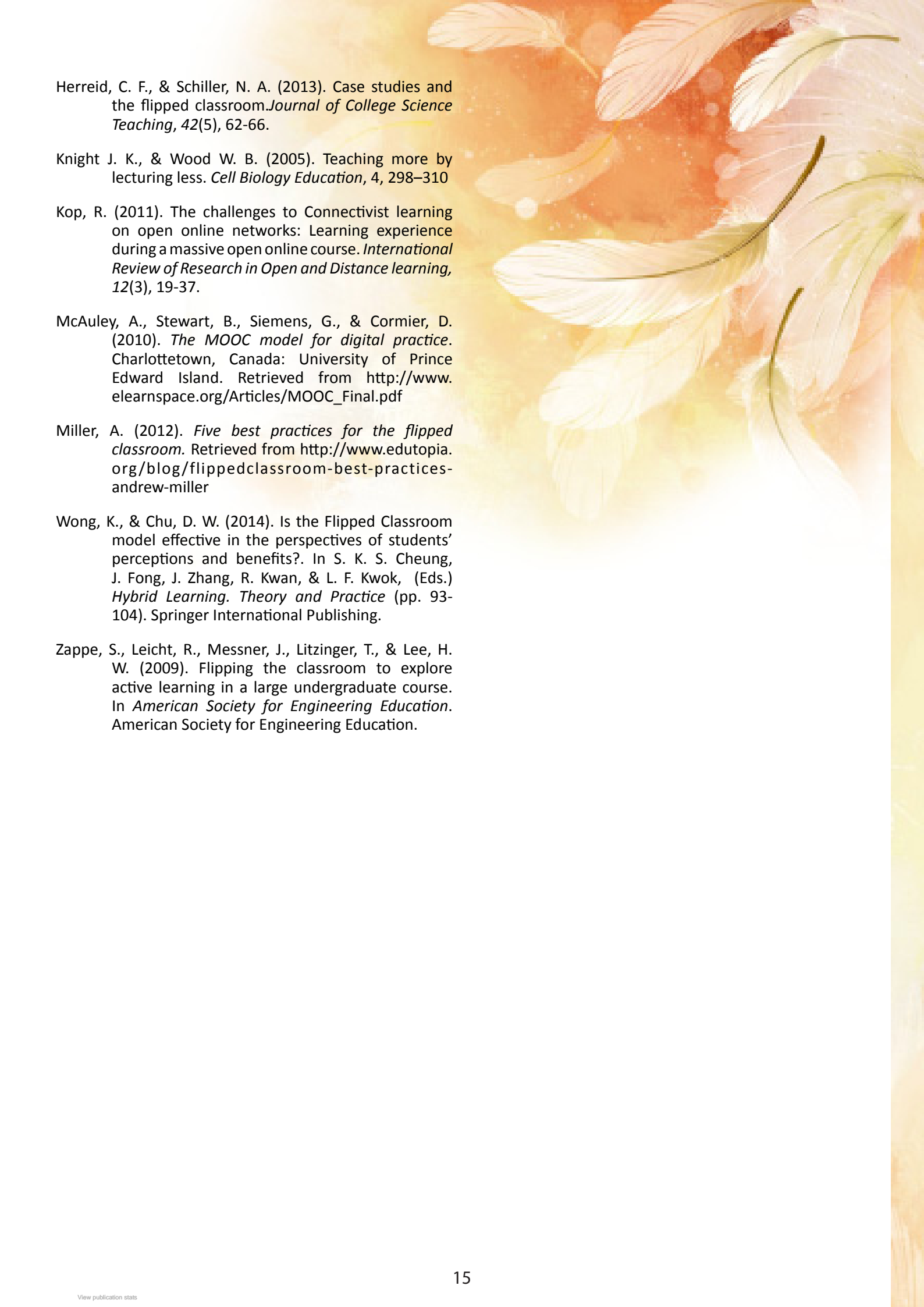Berrett, D. (2012, February 19). How 'flipping' the classroom can improve the traditional lecture. *The Chronicle of Higher Education*. Retrieved from http://chronicle.com/article/How-Flipping-theClassroom/130857/

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