Analysis of Student Performance Using Massive Open Online Courses as Blended Learning Approach in Learning *Second Language*

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ABSTRACT – Massive Open Online Course (MOOC) provides an effective learning platform with various high-quality educational materials accessible to learners from all over the world. However, there are still problems and challenges including assessment and lack of engagement. This paper analyses students' performance in using MOOC as a blended learning approach to learn a *Second Language*.

1. INTRODUCTION

Massive open online courses (MOOCs) provide people from all over the world the opportunity to expand their education for free without any commitment or prior requirements [1]. Among the popular MOOC platform includes Coursera, edX, FutureLearn, OpenLearning, and Udemy. MOOC in education must have three requirements; (i) assessment (ii) instructor and (iii) model [2]. Current MOOCs are (i) lacking of personalized learning guidance, and (ii) intelligent assessment for individuals [3]. B. T. Wong [4] highlighted in MOOC, assessment is a big challenge for the large number of student to get detailed and timely feedback. T. Tenório et al. [5] mentioned that assessment can increase the performance of students at the same time it brings benefits to the teacher. J. Qiu et al. [6] listed the importance factors on student performance which include: (i) hard working, (ii) engaging, and (iii) homophily. A. Elbadrawy et al. [7], stated that student performance specific features include (i) cumGPA and (ii) cumGrade. J. W. Gikandi et al. [8] stated that analytical rubric helps students to (i) assess their learning, (ii) guide expected performance (iii) understand the purpose of assessment, and (iv) increase students' commitment. In this paper, we analyses students' performance using MOOC as blended learning approach in learning a *Second Language* course.

2. METHODOLOGY

Samples; The study was conducted using two separate samples which involve two cohorts of students that took Mandarin course: Cohort 1 consists of 617 students in Semester 1 2015/2016, while Cohort 2 consists of 231 students in Semester 2 2015/2016. The MOOC courses were implemented as a blended learning approach for the two cohorts of UTeM students.

Design & Development; For Cohort 1, the MOOC design consists of 10 unit of lessons (each with lecture videos, dialogue videos & lecture slides), and 40 e-activities (with online quizzes, essay writing, self-video presentation, and audio listening assessment). For Cohort 2, the MOOC design was further improved which consists of 11 unit of lessons, and 45 e-activities.

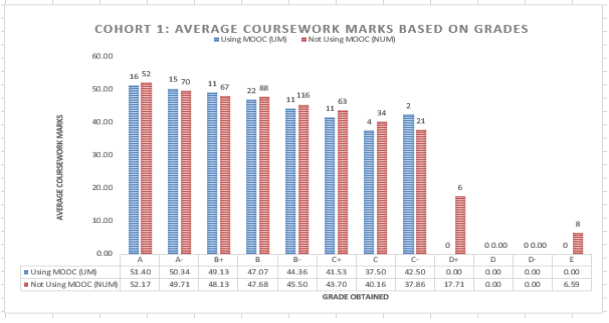
Implementation; For each cohort, students were taught face-to-face by two language teachers and encouraged to enroll to the MOOC course implemented as a blended learning approach. Duration of the MOOC learning for each cohort was one semester. As part of the coursework assessment, each cohort was required to do a project. For Cohort 1, students were required to prepare & upload an essay written in Chinese characters, and self-video presentation of the essay. For Cohort 2, students were required to do a video presentation as a group project.

Instrument; Coursework Tests & Assignments that covers phonetics & vocabulary tests, and assignments on writing, presentation & group report (Tests: 30%, Assignments: 30%). Total marks for coursework is 60.

Data Collection Procedure: Data collection was conducted for one year. Coursework assessments were conducted throughout the one semester duration for each cohort. The MOOC lessons and e-activities were implemented as a blended learning to support the face-to-face learning conducted by the language teachers. Some of the assessments were conducted via face-to-face and some of it via MOOC.

3. RESULT AND DISCUSSION

Table 1 shows the two samples used in this study showing the number of students using and not using MOOC for each cohort. As we can see in Table 1, Cohort 1, the first cohort introduced with the usage of MOOC, only 14.9% of the students used MOOC. In Cohort 2, the usage of MOOC has increased to 92.64%.



	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Using MOOC (UM)	51.40	50.34	49.13	47.07	44.36	41.53	37.50	42.50	0.00	0.00	0.00	0.00
Not Using MOOC (NUM)	52.17	49.71	48.13	47.68	45.50	43.70	40.16	37.86	17.71	0.00	0.00	6.59

Figure 1: Average coursework for Cohort 1

Figure 1 and 2 show the average coursework marks by students according to grades they obtained for Cohort 1 and 2 accordingly. The figures also indicate the number of students represented in each bar. Findings show positive results of students using MOOC. In Cohort 1, although 92 students used MOOC to support their

learning, we can still see that MOOC brought some improvement in their learning. Figure 1 show that all students that use MOOC passed the subject with at least C- as their grades, while 6 students that did not use MOOC got D+ and 8 students failed the subject.

Table 1 shows the samples used in the study.

Samples	Cohort 1 (Session I 2015/16)		Cohort 2 (Session II 2015/16)	
	N	%	N	%
Using MOOC	92	14.91	214	92.64
Not Using MOOC	525	85.09	17	7.36
∑	617	100	231	100

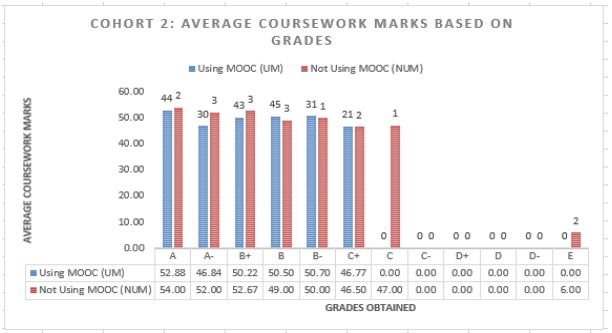


Figure 2: Average coursework for Cohort 2.

This finding is further supported by the results in Cohort 2. Figure 2 shows that all students that use MOOC passed the subject with at least C+ as their grades, while 1 student that did not use MOOC got C and 2 students failed the subject.

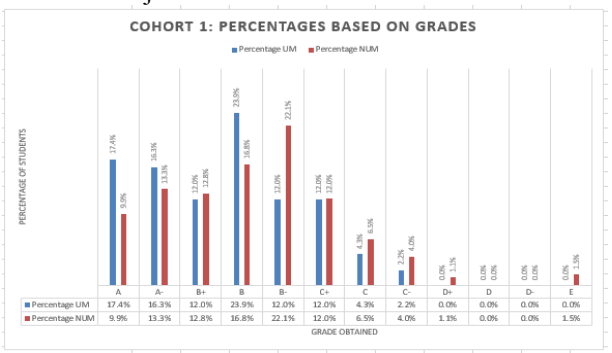


Figure 3: Percentage of students according to grades for Cohort 1.

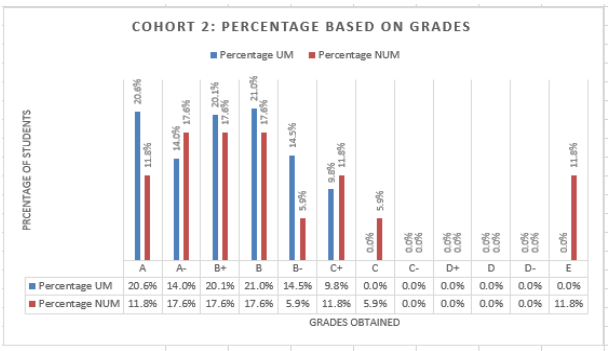


Figure 4: Percentage of students according to grades for Cohort 2.

Figure 3 and 4 strengthen this finding further. Students that used MOOC got better results than those not using MOOC. Figure 3 shows that 17.4% of students that use MOOC got A while only 9.9% of students not using MOOC got A. Figure 4 also confirms the finding whereby 20.6% of students using MOOC in Cohort 2 got A grade while only 11.8% of students that were not using MOOC got A grade.

4. CONCLUSION

This study presents findings on the implementation of a blended learning approach in learning a Second Language. Analysis using coursework marks and percentage of students' grades that compare students' performance that using and not using MOOC was conducted. The findings show that students using MOOC have better performance than those not using MOOC. In future, we will further analyze the effectiveness attributes of MOOC assessment.

5. ACKNOWLEDGEMENT

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