USER EXPERIENCE IN MOOC ART COURSES:
A CASE STUDY AT OPEN UNIVERSITY MALAYSIA

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ABSTRACT

In the conventional way of teaching art, which is a skills-based, subject areas are usually delivered through face-to-face teaching in the studio setting. The advancement of technology, through the existence of online learning platforms such as learning management systems and the Massive Open Online Course systems, has benefitted many educators in delivering their courses due to the flexibility and personalised learning environment provided by most of the online learning platforms. Regardless of all the constraints, especially in its reliability in demonstrating the learner's competency level, art subjects can also be delivered through online learning. This study intends to observe the users' experience in performing the tasks on the course page in an art course at Open University Malaysia delivered through the massive open online course platform at openlearning.com. It also aims to observe the behaviour of the 616 participants in the course. The course has been conducted since October 2014. The study will report on the user experience based on the observation of the number of views on the course page and average time spent per second on the page. Both the number of views and average time spent per second are measured through the split (A/B) testing method to measure how those two groups perform, categorised according to the content.

Keywords: *art, Massive Open Online Course, competency-based learning, user experience, usability study*

INTRODUCTION

A combination of skills is useful in skills-based learning. Knowledge acquisition is developed in a classroom environment where independence, thinking skills, collaboration, and active learning take place throughout the learning process. Facilitators can quickly transmit the content through their strategic skills; however, mindset change is essential to be a skills-based educator, in terms of delivering the content to the learners. Fleetham (2009) has stated that there is a slight yet very significant change needed in one's mindset if he or she wants to be a skills-based educator.

The characteristics of learners of art and music rely on the nature of the subject. The delivery of the content needs to be concrete in nature. Most of the art content is delivered via an inquiry-based model. A significant facet of art coursework is inquiry-based, which means it revolves around questioning and understanding concepts rather than finding the answer to a given problem as there are multiple right answers to any given question (as cited in Ghanbari, 2015). Therefore, efficient design of content for an art course relies on the way it is modelled. Most art classes are conducted face to face through studio-based teaching,

which does not merely focus on skills and techniques, but also stresses on the theoretical aspects of art, such as art appreciation, history of art, and so forth. Harwood brings studio teaching, the most frequent form of instruction within the art disciplines, to the fore as an important object of research because of its unique setting and potential to contribute to our educational knowledge (as cited in Svensson & Edström, 2011, p. 2).

Studio-based or inquiry-based teaching can be enhanced by online facilities due to their capability to increase the rate of communication through the learning community. However, delivering skills-based content via online platforms needs proper planning, especially in catering for the students' needs. Online platforms can enable learners to expand their knowledge by sharing their skills and creative works. Moreover, networks of learning are transforming how we see communities as crucial in expanding how teaching and learning are understood and embracing the unknown outcomes of these human interactions (Leake, 2014: 26).

This study is based on the content of an art course that is populated in the MOOC platform at Open learning.com. Open learning.com provides a workable design template that has a sense of a Personalised Learning Environment (PLE), which enables the learners to perform tasks and access instructional resources at their pace and according to their preferences. Educause Learning Initiatives (2009) defined PLE as the tools, communities, and services that constitute the individual educational platforms learners use to direct their learning and pursue educational goals. A PLE provides support for students to set their learning goals with the assistance of their teachers in managing the learning. Usability is of importance to ensure that the system functions according to the user's execution of the tasks provided in the system.

Innovative Methods for Awards Procedures of ICT learning in Europe (IMAILE, n.d.) defined PLE as a systems that help learners take control of and manage their own learning. This includes providing support for learners to:
    (1)   set their own learning goals (with support of their teachers);
    (2)   manage their learning, both content and process; and
    (3)   communicate with others in the process of learning.

The content placed on the activity page needs to be in line with these three elements. These elements should also be considered in order to indirectly construct a sense of personalisation for the user due to their high engagement with the content.

LITERATURE REVIEW

A PLE is an environment that can facilitate learners' performance in undergoing the task laid out in each of the course pages. In a personalised learning environment, the organisation of learning tasks and the construction of paths are designed to meet challenging standards involving the learner. Increasingly, students are given driving choices to contribute the critical voice and to take responsibility for, their learning (Association for Supervision and Curriculum Development Iowa, 2014).

At the early stage of implementation, the toughest part is accepting and implementing a new learning paradigm. In changing mode from conventional to either blended or entirely online, it will take time for the educators to adapt and execute, due to concerns about delivery and learner acceptance. During the learning process of designing lessons to meet the PLE criteria, educators should consider the student rather than the institution, as the function of the system.

Learnability of the course content (Duchastel, 2003) is a distinct issue in online learning. In the context of this study, learnability refers to the ability of the learners to accomplish the task provided on the course page, which requires well-designed material that supports the learning. Learners can be successful if the designer is able to contextualise the usability factors, over and beyond the context issues. The ability of the course page to act as an attention grabber relies on the associations among the content. Too many materials may lead to confusion, and too little content may result in learners misunderstanding the concept. In memory recognition for a user interface, one of the factors that is used in this study is "Recognition vs. Recall", described as the amount of cues in recall that can help the memory retrieval, whereby recall involves fewer cues than recognition (Budiu, 2014).

User experience is defined as every aspect of the user's interaction with a product, service, or company that makes up the user's perceptions of the whole. User experience design as a discipline is concerned with all the elements that together make up that interface, including layout, visual design, text, brand, sound, and interaction (User Experience Professional Association, 2014). In the context of this study, PLE is defined as an integrated system that supports the learning process through the learning platform according to the learner's ability in performing the task laid out in the activity page. The integrated system includes the automated system that triggers the communication and tracking of the participation amongst users. Hence, the page that hosts the content should be designed in consideration of users' ability to react and response to it.

This study intends to observe and evaluate the user's experience in performing the task from each event in the skills-based MOOC art course hosted by in openlearning.com. It is also designed to observe the 'number of views', which reflects the events and 'average time on the page', which reflects the special events. The course entitled, "Watercolour Painting Workshop" was uploaded to openlearning.com at the URL: https://www.openlearning.com/courses/watercolorpaintingworkshop. The course is delivered through fully online learning with the support of textual and rich media resources and facilitated by online facilitators according to their areas of expertise.

Seven hundred and ninety (n=790) participants from various part of the world with different backgrounds and knowledge have enrolled in this course since October 2014.

Research Questions

Specifically, this research seeks the answers to the following questions:
- (1) What is the impact of events on the special events to the user's experience?
- (2) What are the main criteria that make a difference between two cases in the events?

METHODOLOGY

This study used the A/B split test method to measure the quality attributes as stated by Nielsen (2012);
- (1) Definition of Utility = whether it provides the features you need.
- (2) Definition of Usability = how easy and pleasant these features are to use.
- (3) Definition of Usefulness = usability and utility.

PLE support for the learning process was evaluated through quality attributes, which on the whole can be explicitly measured by the utility. Cardello (2014) summarizes the A/B split test as a "companion" of user research to identify true causes and develop well-informed design variations. This study focuses on the user experience. The experience was investigated

based on learners' capability to achieve the objective of the task in each 'event.' Each of the tasks is clearly specified on the activity page in the course. The performances of the pages on its functions on the user's experience (Ux) are based on three types of the pages chosen according to the criteria below:

1) The page with video
2) The page with Task
3) The page with images. Each case of the page was divided into four scenarios:

Scenario 1: Case A - Video | Case B: Video
Scenario 2: Case A - Task | Case B: Video
Scenario 3: Case A – Image | Case B: Task
Scenario 4: Case A - Video | Case B: Images

The task was measured by comparing two events through the Split A/B test: Average time on Number of views "Special Events #:" and page reflects "Events #:" in the split test calculator. The split test calculator generates the values from the categorised data at Answerminer (https://www.answerminer.com/calculators/ab-test/#tabs-2). The result from a free A/B split test calculator is analysed, where the best case between both A/B reflects the value of experience recorded. In each case, a higher percentage reflects a greater experience by the user, as it shows greater commitment from the user with regard to the event.

FINDINGS AND DISCUSSION

The findings reflect the Average time on Number of views as "Special Events #:" and page as "Events #:" The average duration of views is implicit in nature where the users only view, and no action is taken on what is being viewed. The page that reflects as "Events#" is explicit in nature due to the user's reaction towards what has being laid out in the activity page.

Research Question 1: What is the impact of events on the special events to the user's experience?
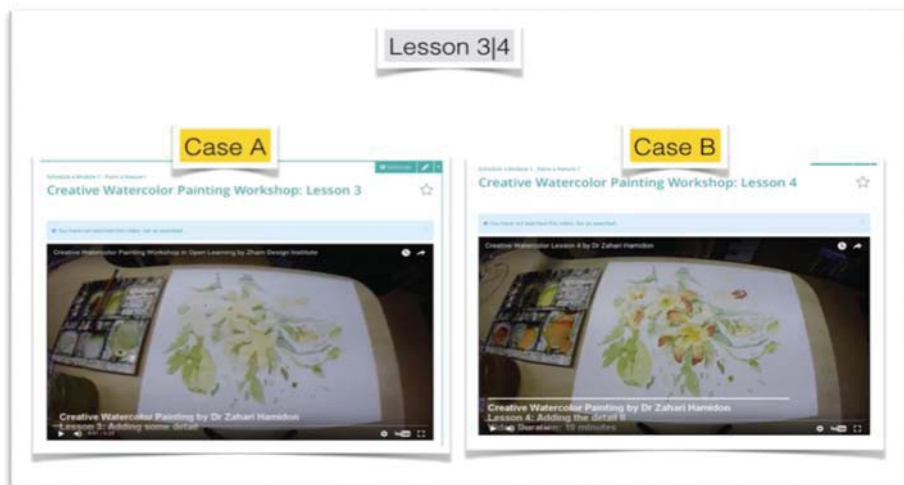
Scenario 1: Case A - Video | Case B: Video
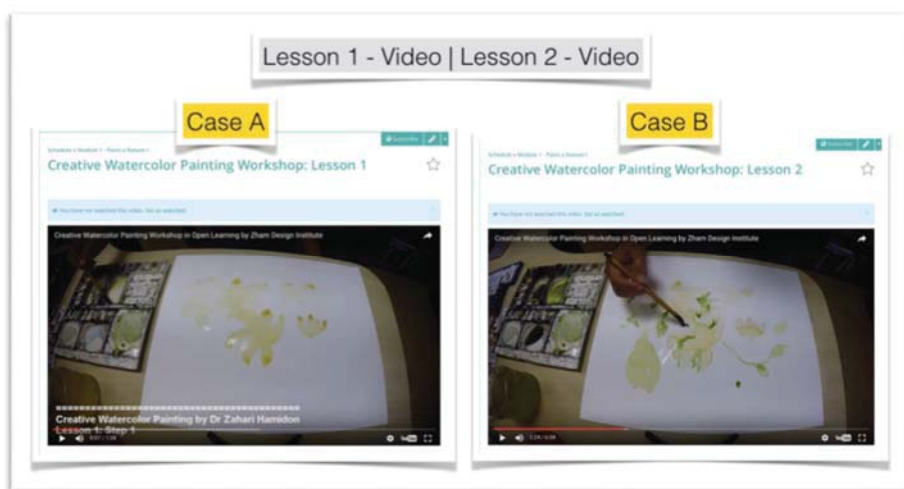
	Events	Special Events		
	No of Views	Average Time on Page	Case	%
Creative Watercolor Painting Workshop: Lesson 1	68	1680	A	4.05**
Creative Watercolor Painting Workshop: Lesson 2	40	1102	B	3.63

Figure 1: Findings in Case A (Lesson 1) and B (Lesson 2)

There is 11.51% experienced difference between Case A and Case B. The experienced conversion is 4.05% for Case A and 3.63% for Case B. The experienced difference is small, which means that Case A may be somewhat better than Case B. This shows that the video in the page Creative Watercolor Painting Workshop: Lesson 1 is likely to perform better than the video in the page Creative Watercolor Painting Workshop: Lesson 2.
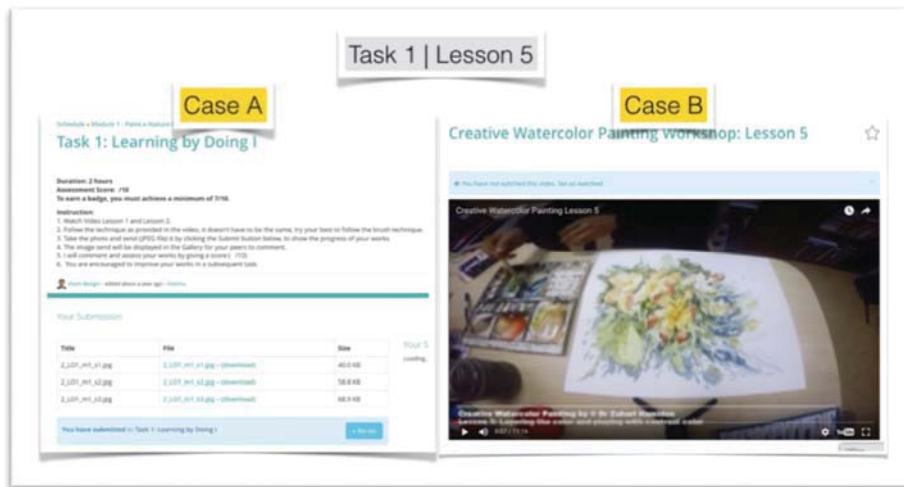

	Events	Special Events		
	No of Views	Average Time on Page	Case	%
Creative Watercolor Painting Workshop: Lesson 3	21	118	A	*17.8
Creative Watercolor Painting Workshop: Lesson 4	20	165	B	12.12

Figure 2: Findings in Case A (Lesson 3) and B (Lesson 4)

There is 46.82% experienced difference between case A and case B. The experienced conversion for Case A is 17.8% and for Case B, it is 12.12%. The experienced difference is moderate. Therefore, it is likely that Case A is somewhat better than Case B. This shows that the video in the page Creative Watercolor Painting Workshop: Lesson 3 performed better than the video in the page Creative Watercolor Painting Workshop: Lesson 4.
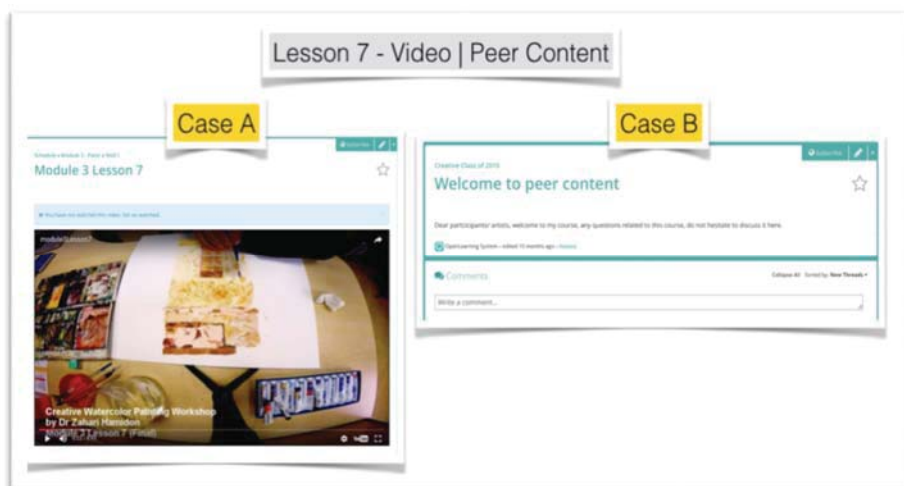
Scenario 2: Case A - Task | Case B: Video

	Events	Special Events		
	No of Views	Average Time on Page	Case	%
Task 1: Learning by Doing I	29	445	A	*6.52
Creative Watercolor Painting Workshop: Lesson 5	24	908	B	2.64

Figure 3:Findings in Case A (Task 1) and B (Lesson 5)

The experienced conversion is 6.52% for Case A and 2.64% for Case B. The experienced difference is moderate. It is likely that Case A is somewhat better than Case B. This shows that the page Task 1: Learning by Doing I in Case A is better than the page Creative Watercolor Painting Workshop: Lesson 5 in Case B.
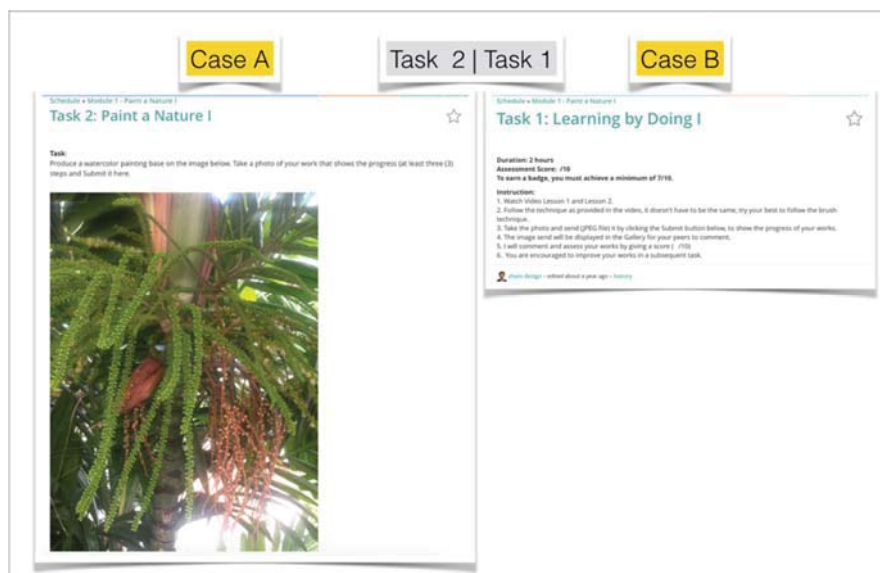
	Events	Special Events		
	No of Views	Average Time on Page	Case	%
Module 3 Lesson 7	3	31	A	9.68
Welcome to peer content	4	11	B	36*

Figure 4: Findings in Case A (Lesson 7) and B (Peer Content)

The experienced conversion is 9.68% for Case A and 36.56% for Case B. The experienced difference is small. Case B is somewhat better than Case A. This shows that the page in Creative Watercolor Painting Workshop: Lesson 5 in Case B is better than the page in Task 1: Learning by Doing I in Case A.

Scenario 3: Case A - Image | Case B: Task

	Events	Special Events		
	No of Views	Average Time on Page	Case	%
Task 2: Paint a Nature I	20	65	A	30.77
Task 1: Learning by Doing I	17	64	B	26.56

Figure 5: Findings in Case A (Task 2) and B (Task 1)

The experienced conversion for Case A is 30.77% and for Case B, it is 26.56%. The experienced difference is small. Case B is somewhat better than Case A. This shows that the page in Lesson 5 Creative Watercolor Painting Workshop: in Case B is better than Task 1: Learning by Doing I in Case A.

Scenario 4: Video | Images

	Events	Special Events		
	No of Views	Average Time on Page	Case	%
Module 3 Lesson 6	2	22	A	9.09
Learning by Doing II	3	34	B	8.82

Figure 6: Findings in Case A (Lesson 6) and B (Learning by Doing II)

The experienced difference of 3.03% between Case A with 51.37% somewhat insignificant than Case B (29.87%).The experienced conversion is 51.37% for Case A and 48.63% for Case B. The experienced difference is small. The findings show that both the page Module 3 Lesson 6 in Case A and the page Learning by Doing II in Case B are similar in terms of performance.

Research Question 2: What are the main criteria that make a difference between the two cases in the events?

The main criteria that make a difference between two cases depend on the type of information laid out in the activity page. In Scenario 2, the users seem to engage more on the activity page than they do with the video. In Case B which provides a complete demonstration with the support of a complete task in Case A. In Scenario 3, users that perform the task in Case B backed up by still image in Case A show lower engagement due to lack of a step-by-step guide in the still image. Scenario 1 and 4 are considered very low in learner's engagement, even though the pages provided step-by-step demonstration videos (in Scenario 1) and a step-by-step demonstration video as well as a still image (in Scenario 4), what is lacking is a task.
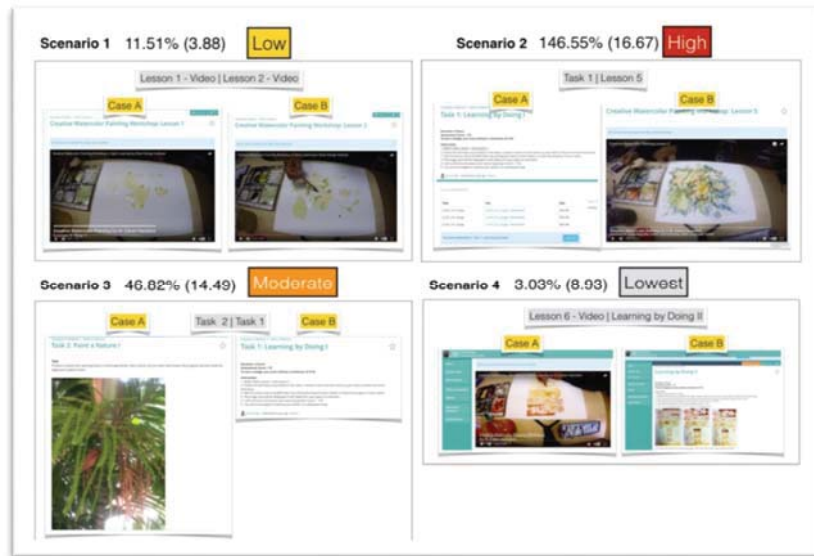
Figure 7: Findings on all Scenarios in Case A and B

In skills-based learning, the learner's engagement is crucial because the learners have to demonstrate their skills in achieving a particular standard of competency, which is based on the learning objectives and implemented through the given task. Teaching art within the art disciplines, which is mostly studio-based (Harwood, 2007), can be achieved through online learning due to its ability to increase the rate of communication through the learning community. Online learning enables learners to expand their knowledge by sharing their skills and creative works (Leake, 2014). Based on the factors above, the activity page needs to be enhanced to increase the level of learner engagement. Figure 7 shows indicators that can be used as a point of reference for enhancement purposes.

CONCLUSION

This study contributes to some of the criteria above by observing the user's behaviour in performing a task in four scenarios. However, the activity page can be more efficient if the designers consider the following factors:

(1) The task, images and demonstration video that work hand-in-hand to increase the level of the learner's engagement.
(2) The learning flow should focus on the task first, followed by the demonstration video.
(3) Too many videos or images may affect the learner's engagement in performing the task.

This study is a small case study focusing on the impact of content organization on the learner engagement. Studies on cognitive load will be very useful to support or enhance the findings of this study.

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