

International Journal of Learning, Teaching and Educational Research
Vol. 18, No. 8, pp. 227-242, August 2019
<https://doi.org/10.26803/ijlter.18.8.14>

Massive Open Online Courses (MOOCs) – Understanding Online Learners’ Preferences and Experiences

Herman Fassou Haba

Lord Ashcroft International Business School, Anglia Ruskin University,
Cambridge, United Kingdom

Omkar Dastane¹

Senior Lecturer Cum Head – Center for Postgraduate Studies, FTMS Global
College, School of Accounting and Business, Kuala Lumpur, Malaysia

Abstract. This paper explores online learners’ preferences and experiences of using Massive Open Online Courses (MOOCs) as a leaning environment. The paper thus intends to investigate what online learners prefer and what they experience while using MOOCs. The research employs exploratory approach using qualitative data. It considers reviews posted by the users of the two globally popular website for online learning namely edX (14 million learners) and Coursera (40 million learners). The total of 572 reviews is selected using simple random sampling. Selected reviews were refined based on language and appropriateness and then subjected to thematic analysis pinpointing and recording patterns of meaning (Themes). The thematic analysis presents a framework with eight dimensions to understand MOOC users’ preferences. These identified dimensions are course diversification, experience, pedagogy, support, convenience, ease of use, monetary and quality. The proposed framework can be used to enhance learners experience and continuity of using MOOCs. In future researches, the framework can be tested empirically for its reliability and validity in our future research.

Keywords: MOOCs; Learners’ Preference; Learners’ Experience; Qualitative Study; Online Learning.

1. Introduction

MOOCs being Massive Open Online Courses are based on creating a right educational environment for learners through the internet which is based on

¹ Corresponding author: omkar.dastane@gmail.com; Both authors contributed equally to this manuscript.

convenience and learner satisfaction of taking a course online. The term of MOOCs has taken the attraction of many scholars and researchers in the field of educational science which is seen as a new revolution to define connectivist learning on networks (Roblyer and Doering, 2013). Throughout these decades, there are several online companies which have invested heavily on MOOCs in order to engage learners online due to the tremendous shift which is being seen with the advancement of technology and the rise of big data and artificial intelligence, a lot of learners are abandoning the traditional way of learning and getting much more interested to online education due to convenience, quality teaching, engagement and the affordability of online education.

The value proposed by online education has taken over the whole industry, it is seemed unstoppable and it is observed by some as an upcoming tsunami that is mandatory, if you do not adapt the system, you can be either crushed or you can surf it by welcoming the revolution in the educational sector (Mckenna, 2012). However, the scientific knowledge and comprehension concerning MOOCs is at an early stage and there is still a big challenge and issues concerning the engagement of learners as well as their continuance and MOOCs applications, one shall question whether this inflated aspects related to MOOCs and the respective contribution to development on the level of intellect or it is genuinely resulting from innovative technologies emerged of late. Nevertheless, Interest in MOOCs is increasing by real press attention given to some companies such as Coursera, edX and Udacity by mainstream press (Mckenna, 2012).

The aim of this paper is to understand the real psychological threats and understanding between the MOOCs companies and learners by using a qualitative research method based on thematic analysis technique. The paper intends to explore what learners' prefer for using and experience while using MOOCs. The corresponding research question is what are the various preference factors of learners for using MOOCs as a learning environment?

2. Literature Review

MOOCs being the abbreviation of Massive Open Online Courses had been quoted by researchers and scholars since Siemens and Downes (2005) opened the first MOOC concentrated on connectivism and connective knowledge online course in 2008, though the theoretical assumptions of connectivist had been seen as the learning theory of MOOC by several researchers (Tschofen and Mackness, 2012). Therefore, the real educational theory of MOOCs which is now very popular is the theory of connectivism based on comprehending learning in a digital age.

Definition of Key Term: A *massive open online course (MOOC)* is defined by scholars as an online tutoring or lecture aiming at unlimited attendees and open access via the web (Hussin, 2012). Some other researchers and practitioners defined MOOC as distance learning in terms of correspondence courses which gave birth to e-learning and make education accessible to massive audience of learners around the world.

Connectivism: Siemens and Downes (2005) Theoretical Assumption: this is a theory related to learning and it elaborates how various technologies based on internet such as Web browsers, email, wikis, online discussion forums, social networks, YouTube, and any other tool, have contributed in creation of new opportunities for leaning and sharing information across the web of internet as well as with other people. (Siemens, 2005). For understanding connectivism theory as an important part of the MOOC is that it might play an important role across peer to peer learning and also providing learning to a massive audience of learners that a traditional lecturer in a lecture cannot do in his or her entire life, however with the assumption theory of connectivism in this digital age, MOOC is really being integrated in learners life due to distributed cognition, knowledge sharing, social networks and open educational resources (Downes, 2008). Comprehensively, the theoretical assumption of connectivism are based on the following principles: the process of joining specialized sources of information is learning, non-human appliances or systems can accommodate and facilitate the learning, knowing is important but learning is more critical, continual learning is facilitated by nurturing and maintenance of connections between fields, core skills include concepts and ideas, objective of learning is to keep one self-up-to-date in knowledge, and lastly, learning process is inclusive of decision making. ((Downes, 2008; Siemens, 2005).

Understandably, there had been some criticism concerning the theory of connectivism which is not widely accepted by all scholars. According to Hayes (2015), criticizing connectivism of being pedagogical view instead because it does not address the issue of how to enable learners at the instructional level. Moreover, from the perspective of connectivism theory, it is very important to make a sound connection to current literature associated to online learning and teaching, it can impact the facilitation and design of online learning and teaching which are made simple with objective easy facilitation of discussion on MOOCs research (Ertmer and Newby, 1993). Educator decisions which are driven by the epistemological and ontological stances particularly when such decision are confronted with situational variables in the context of lecturing and online instruction set up were assessed by some researchers. Roblyer and Doering (2013) espoused a perspective comprising of objectivist learning theories consisting information processing on one hand and constructivist learning theories which are inquiry based on the other hand. Therefore, in order to engage learners to online teaching, there are several aspects of online teaching that shall be taken into consideration such as leaners engagement, learning experience, price of the course, features, content quality and ease of use. In most literature related to MOOCs, scholars have been addressing those factors to understand whether it is impacting and influencing learners' adaption of online learning website.

Latest Empirical researches in the field of MOOCs: There are several studies done in the field of open online courses around the world, however, the notable ones are done in the western world wanting to be the pillar of modern education with MOOCs. Bozkurt, Ozdamar Keskin, and De Waard (2016), study on research trends in massive open online courses (MOOCs) from dissertations published from 2008 to 2015 in terms of identifying research trends from the

academic documents. However, trends in research themes were uncovered by employing systematic review approach focusing on theoretical backgrounds, and the data analysis method used is content analysis. The findings of their research study indicates that MOOCs education are much more related to computer science, information technology, education and engineering field of study as a new trends of MOOCs literature. Bozkurt, Akgün-özbek, and Zawacki-Richter (2017); study in terms of understanding the patterns in MOOCs research: review and content analysis of research on MOOCs (2008-2015). Using qualitative research method to fully understand the phenomenon with data collected through review of 362 empirical studies published in various peer-reviewed journals ranging from 2008 to 2015. Content analysis was utilized in order to analyze the information of the research study. Therefore, the findings showed that MOOC studies do not benefit from being viewed through theoretical lenses.

The study of Zawacki-Richter, Bozkurt, Alturki, and Aldraiweesh (2018), on what research says about MOOCs with an explorative content analysis by reviewing 362 empirical articles published in peer-reviewed journals from 2008 to 2015. Comprehensively, a text mining tool was used to analyze the content of the published research journal articles and findings of the study demonstrates four dimensions that can line of research and are as followed: the potential and challenges of MOOCs for universities, MOOC platforms, learners and content in MOOCs and lastly the quality of MOOCs and instructional design issues.

The study of Al-Rahmi et al. (2019) on massive open online courses (MOOCs) with data on higher education by systematic collection of 219 articles from 2012 to 2017 which were related to MOOCs in higher education. Five variables were used such as intention to use, interaction engagement, motivations and satisfaction associated to the improvement of MOOCs students' academic performance can be influenced by MOOC which has the advantage of facilitating the learning process through offering materials and enabling the share of information.

Armellini and Aiyegbayo (2010), on the pedagogical innovation of massive open online courses, using a survey questionnaire of different stakeholders describing MOOCs, 106 respondents described MOOCs as free, openly accessible online courses that can attract large numbers of participants. 15.1% of the respondents surveyed believed that MOOCs are pedagogically innovative but the remaining believes it is really pedagogically innovative.

Research Gap: There are a lot of researches done in field of massive open online courses (MOOCs) which aimed at participants. However, most of the studies often focused on understanding the content analysis of peer review in order to identify key trends and factors which can drive the intention to use MOOCs and the retention of learners on MOOCs platform. Few studies used thematic analysis research method to analyze learners concern from the reviews in order to derive key factors which unable their intention to use MOOCs and their satisfaction to continuously interact with the MOOC applications. Therefore, this research will fill the gap of understanding recent users concern, preferences and

experiences of utilizing MOOCs and make a meaning contribution into a MOOCs literature.

3. Methodology

In this methodology, there is a clear highlight concerning the nature of the research aim which is based on understanding the key factors which can enable the interaction of learners and MOOCs from the learner view point. Therefore, the research method which is going to be used in this study is a qualitative research method that is based on inductive approach, where the researcher undertakes detailed observations of the world and moves towards more abstract generalizations and ideas. As an inductive approach utilized in this research study for the purpose of identifying important factors can be identified and be useful for existing literature in the field of MOOCs. Furthermore, positivism research philosophy is used in this research study in order to undertake the analysis of the study for knowledge claim. According to Creswell (2013), knowledge claim means that researchers start a project with certain assumptions about how they will learn and what they will learn during their enquiry which is based on research philosophy with the consideration of exploratory research design which can lead to a better data collection.

Data Collection Technique: Learners Reviews from edX and Coursera : The use of the two popular website for online learning in the world based in the United States, it is important to comprehend and know that edX is currently having more than 14 million learners and Coursera is actually having more than 40 million learners. So getting data and information on those popular websites for online education is significant for this research study. However, the data collection being a secondary data collection method from the two giants of online education industry in the world, the data reviews information of learners who have experienced the two websites. Though, the data source is going to be popular online consumer reviews which are consumer affairs, sitejabber and trustpilot. The qualitative information that is collected is recent reviews from two websites namely <https://www.trustpilot.com/review/www.edx.org> and <https://www.sitejabber.com/reviews/coursera.org>.

Sample Technique: This study is going to be undertaken with a simple random sampling method in terms of selecting learner reviews from popular consumer affairs review. According to Rice (2007), simple random sample is a subset of individuals chosen from a larger set (a population). The selection of each review is randomly done and so is by chance, in a way that each review has the same and equal probability of being selected at any stage of sampling process. The total reviews selected for the analysis are 572 out of which we eliminated 18 reviews which are written in poor English. Further elimination is carried out with 'inappropriateness of language' as criteria. This includes harsh, extreme or offensive word. We eliminated 22 reviews through this filter. Equal number of reviews is taken from both platforms and 8 reviews were further eliminated being repetitive in nature. Therefore total reviews used for the thematic analysis are 524. There review is then numbered from 1 to 524. Summary of selected sample reviews are as follows.

Table 1: Review selection and refinement statistics

Particular	Numbers
Total Reviews Selected	572
Reviews Eliminated (poor English)	18
Reviews Eliminated (Inappropriate Language)	22
Percentage of Reviews taken from each websites	50% : 50%
Reviews Eliminated (Repetition)	08
Total reviews Considered	524

Data Analysis Technique: Thematic analysis is used in the study to understand by decoding the factors which influence learners' interaction with MOOCs. It is a very popular qualitative method of data analysis used by researchers; it focuses on pinpointing and recording patterns of meaning (or "themes") within dataset. The statistical software which is used in this research study will be Nvivo12 for data analysis in order to get the insight of the research study. The reviews as described above are imported to Nvivo12 project and coding is done using mind map. Broad topic area are then coded in the form of 'themes' and upon reviewing of the themes, nodes of the mind-map were re-organized. Themes were thus identified by exploring the data using coding queries.

4. Data Analysis and Findings

The researchers using thematic analysis to understand and identify themes and patterns within the research dataset by analyzing them is very important in this study because it is used to comprehend and represent learners experience regarding their engagement with MOOCs companies such as Coursera and Edx (Braun and Clarke, 2006). With the use of Nvivo12 in order to analyze the research study data set which is based on coding team (nodes) for understanding the factors which can influence learners of MOOCs, there will be analysis of word frequency and also understanding of the thematic map of MOOCs.

The result of learner reviews is based on certain values which can be divided into themes and subthemes. Therefore, the most popular codes or teams in the research study are convenience, course diversification, ease of use, engagement, experience, mission, monetary, pedagogy, quality and support.

Theme 1: Convenience of learning on MOOCs

According to Shove (2003), convenience is a very important variable which tries to increase ease in accessibility, save resources and decrease frustration. Thus, convenience of learning online can be a very important aspect that MOOCs companies can consider which is based on participants' response for example of what some participants have expressed:

"Sometimes life doesn't care what you are trying to do and MOOCs companies say that is fine and come back when you have time. So if you are working full time or have a family MOOCs is a great way to reskill"
(Coursera, 13)

"I didn't have time for some MOOCs course because they are too inflexible on the schedule so I couldn't keep up (full time jobs and 2 kids)" (Coursera, 2)

"EdX is very convenient and offer variety of courses that I would be interested in" (edX, 33)

"EdX is a great tool to learn new things from lecturers/professors from universities around the world" (edX, 12)

Convenience has been a very important part in terms of understanding the use of MOOCs because sometimes if users usually want to use MOOCs it has to be based on their convenience to leave the traditional education model in order to follow the online contextual method of learning and education which is a very important aspect of it. According to Zhong et al. (2016) on motivations and challenges in MOOCs with Eastern Insights, MOOCs can augment an institution's reached because they could attract a large number of students and all students have the convenience of working at their own time and pace.

Theme 2: Course diversification for learners on MOOCs

It is very important to have your courses being diversified with MOOCs companies; learners have noticed that they would like to pursue some courses on the MOOCs platform which they are not able to find. So the diversification of MOOCs program is an issue because it makes some learners' retention very difficult as expressed by some MOOCs participants:

"As a health care professional, I also wanted to see more healthcare examples of lean six sigma applications" (edX, 54)

"Too many courses of computer science, what about other engineering disciplines?" (edX, 72)

"More professional courses need to be added" (Coursera, 28)

"I would like to see more courses in positive psychology and soft skills in general" (Coursera, 30)

These above statements try demonstrate that it is very important introducing various courses for acquiring more learners. There has not been an extensive academic literature in terms of course diversification of MOOCs. However, it is still one of the most pressing topics in terms of learners' retention on MOOCs platform. Some of the learners do not see that it is very important for them to learn the things they are very interested in on MOOCs platform; they usually see that MOOCs platforms are lacking some subject which is not very important for them and they are trying to find a solution to see and get those information to learn on MOOCs but not having the opportunity to learn much more things on the platform.

Theme 3: Ease of use of MOOCs application

Perceived ease of use regarding information technology has been used by several scholars to comprehend the technology acceptance model and continuous use of technology in a sense that it can help learners adapt MOOCs application. Davis (1989) has tried to comprehend that ease of use is very important variable for technology acceptance model and the continuous use of Technology. Therefore, some learners of MOOCs expressed statements concerning the ease of use of technology:

“Learning with MOOCs was very simple. The navigation across the modules was very easy” (Coursera, 59)

“EdX is easy to review after finalizing the course that has been taken” (edX, 28)

“Great courses great interaction, you need a laptop or pc though, the mobile app just isn’t good enough” (Coursera, 44)

On top of ease of use, there is a subtheme that is related to the operational side of the MOOCs, and the subtheme is performance of the application. Perceived ease of use has been a very important variable used by scholars in order to understand the continuous use of technology, Davis (1989) developed the technology acceptance model to know that it is a very important factor which can influence users and which was also supported by Venkatesh et al. (2003) with the unified theory of acceptance and use of technology which also use the variable of perceived ease of use. The has also been validated by Haba and Dastane (2018) for mobile apps as well as Safie, Dastane and Ma’arif (2019).

Subtheme 3: Performance of MOOC application

Concerning the subtheme of ease of use, it is very important to understand that several learners’ have had issues with the performance of MOOCs website during their learning process which is associated as a subtheme of ease of use:

“Generally edX platform is good but more improvements in edX mobile app is needed” (edX, 42)

“The software is pathetic sometimes get hanged, doesn’t upload the photo and a lot many issues” (Coursera, 62)

“Contents are good but the platform is a waste in terms of performance” (edX, 66)

“The courses I have done have been sloppily prepared with lots of bugs and unresponsive moderators” (Coursera, 78)

Regarding the performance and ease of use MOOCs, the findings of this research can be supported by the study of Wu and Chen (2017) on the continuance intention to use MOOCs in China with integrating the technology acceptance model (TAM) and task technology fit (TTF) model based on a sample size of 252 participants and testing the research study hypothesis with structural equation

modeling implemented via partial least squares (PLS). Therefore, the findings of their study demonstrated that perceived ease of use plays an important role in predicting continuance intention. From the basic understanding, it is important to know that can sometimes have no significant effect on attitude and individual technology.

Theme 4: Learner experience while using MOOCs applications for their learning

First of all, for any application, user experience is very important for retention. User experience is referred as a person's emotions and attitudes about utilizing system for a service. In order for MOOCs applications to be adapted by users, it has to be really efficient for learners, thus certain participants during the MOOCs reviews have evoked the point of experience:

"Simply great, I have done many online courses using different platforms but edX is by far the best and I wouldn't be able to do it without them" (edX, 81)

"Very positive experience, easy to review after finalizing the course" (edX, 85)

"Overall experience is very bad so rated 1" (Coursera, 39)

It has been supported by researchers and academicians that learners must have a good experience while learning on MOOCs which will decrease their dropout rate in terms of course completion, and several qualitative researches focus on the learners' experience, and then it suggested that lecturers should provide their support in order to enhance learner experience for using MOOCs and be more responsive for learners' needs and wants. Therefore, experience is very important for the continuous learning which can also be categorized as emotional feeling of wanting to learn something one likes on a MOOCs platform and lead the learner to the dream and objective they want to pursuit for a better future.

Theme 5: Monetary aspect for learners to use MOOCs

Money is an instrument used for the transaction of goods and services or for any sort of financial dealings in a country or a market. In the context of MOOCs, price and monetary management has been very important for learners and MOOCs companies alike because it is the mean of exchange. Therefore, with our review done some learners have expressed their concern about the monetary aspect of MOOCs:

"Excellent courses, there could be more incentives as far as financial aid but other than that I increased my knowledge immensely" (edX, 135)

"Edx is a great platform for e-learning, but now you have to pay for a certificate in order to get access to the course" (Coursera, 55)

"I have since attempted to contact the company, they replied with a generic email about their non-refundable policy" (Coursera, 128)

Monetary aspect is very important for MOOCs companies and learners because it is the bright that demonstrate the provision of value proposition. However, due to the cost of higher education, several students are turning to MOOCs in order to get reskill. Companies will eventually seize which fail to meet demands of consumers at competitive prices as they tend to lose customers, meaning that MOOCs companies need to provide fair price and comprehensive learning content to their learners if they want to survive in this new world of education business.

Theme 6: Pedagogy aspect for learners to use MOOCs

It is a very important part to understand the MOOCs adaptability online because it is based on the real comprehension associated to the growth of learners while using MOOCs to develop themselves or their career for a better prospect (Pedersen and Liu, 2003). It is the study of knowledge and skills are imparted in an educational context which takes place during the learning interaction and the in the context of this research study thematic analysis, a lot of participants have tried to express their issues concerning the pedagogy of MOOCs:

“There were some problems with the pedagogy during the first week of the second course which was related to the way quantum algorithms were taught, especially shore’s algorithm. I didn’t really have the number theory background to understand the materials, and there were simply undefined gaps in that part of the course” (edX, 178)

“No pedagogical support or communication channel, email, chat and absolutely nothing” (Coursera, 120)

“The courses I have done have been sloppily prepared with lots of bugs, unresponsive moderators and dead-zone forums on which it’s virtually impossible to get help” (edX, 162)

As it is known that MOOC is the representation of particular type of the online courses currently prevalent in the educational landscape (Johnson et al. 2015), they can be considered massive because their technological infrastructure has the potential to support large-scale use. As the question arises whether MOOC or whether pedagogy is a very important part of online learning how can a lecturer provides its consumable knowledge to the massive audience of learners via the Internet which can be free of charge without having to meet any strict pre-requisites of knowledge or demographics (Andersen and Ponti, 2014). Therefore, the theme used in this research finding demonstrates that MOOCs cannot be described as inherently pedagogically innovative and pedagogical innovation needs to be considered in order to provide consumable knowledge to a large audience of participants (Armellini and Aiyegbayo, 2010).

Theme 7: Quality aspects for learners of MOOCs

Quality is a pillar of MOOCs consumption and value proposition, if there is no quality content that can be consumable by learners, the value of the MOOCs will be dropping dramatically. Therefore, quality can be referred as the consistency of a service or a product that satisfies targeted customers. Therefore, from the

perspective of the study, a lot of learners of edX and Coursera have expressed their concern regarding quality.

“Demonstrably, edX MOOC is a non-profit platform that survives partly from small donations, is on the verge of making quality education which is historically affordable for all on the planet”. (edX, 213)

“Quality of the content, as a side note is very uneven through the various courses I have taken” (Coursera, 312)

“The courses are all supposed to be curated to be of a high quality, but in my experience the quality varies dramatically” (Coursera, 308)

“The qualities of the courses are generally very good. Unfortunately, trying to take the final exam is often a terrible experience” (edX, 268)

In this part of the analysis, the question may be raised why does quality of MOOCs matter for the participants, this can be argued by (Li and Zhou, 2018) Ehlers, Ossiannilsson and Creelman (2013) demonstrating that learners are entitled to a high quality learning experience, whether they may be enrolled on a fee-paying or an online course. Quality teaching and instructions combine with strong pedagogical innovation is very important for MOOC companies in order to retain learners to learn much more on their platform and provide a real incentive in terms of perceived value of consumers. Learners will trade off the perceived quality of the MOOCs and perceived sacrifice which they are willing to give and that is represented as in a monetary form which is very important. In brief, it can be said that the quality aspects for MOOCs are very important for learners.

Theme 8: Support for learners on MOOC platforms

Support is very important for the continuous use of a MOOCs application because it is the service provided by a MOOCs vendor of a product while learners are trying to engage with the product for the purpose of learning their subjects or their courses online. Several learners have expressed the issue of support on edX and Coursera to enjoy their learning and engage with the course taken:

“EdX seems to be a great place to learn but institutions that offer their courses there don’t always offer technical support for their labs” (edX, 402)

“When I contact the support team with proofs of what has gone wrong and that I want a refund, they don’t even reply” (Coursera, 372)

“No support offered- out of date/incompatible materials issued to complete courses” (Coursera, 384)

“Support replies without reading the problem!!!! I am wasting more time with support than using in study” (edX, 501)

“No call center, the chat support bots never got back to me with a human and I am ultimately very frustrated and dissatisfied” (Coursera, 333)

Limited number of individuals have had access to quality education and it is greatly possible with support and so it is a very important aspect for MOOCs companies success (Andone, 2008). For encouraging education on MOOCs platform is very important because it leads directly to a most important phenomenon of retaining learners but if the learners on the MOOCs platform do not find the support from the teachers in terms of commitment to provide them a good understanding of the course they are attending, it will be very hard to be committed to a MOOCs application, thus teacher commitment to support learners in their learning journey is very important in order to understand the undertaking class (United Nations Educational Scientific and Cultural Organization (UNESCO), 2014).

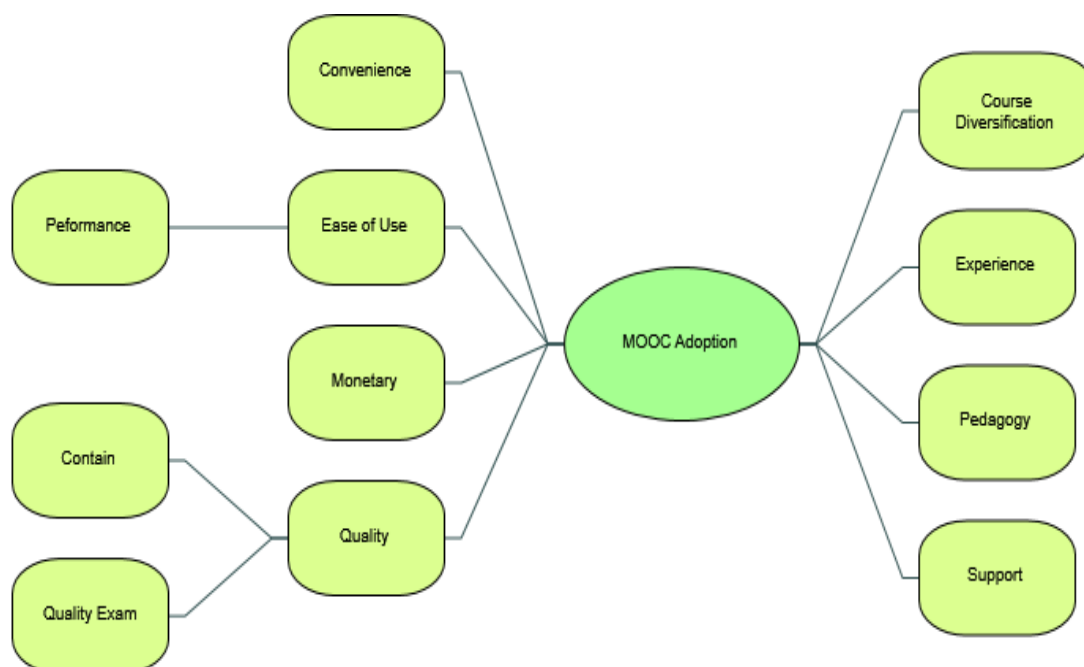


Figure 1. Thematic Map showing Themes associated to MOOCs adaptation (NVivo12 Output)

Comprehensively, the below conceptual framework is a framework derived from the thematic analysis of the research study.

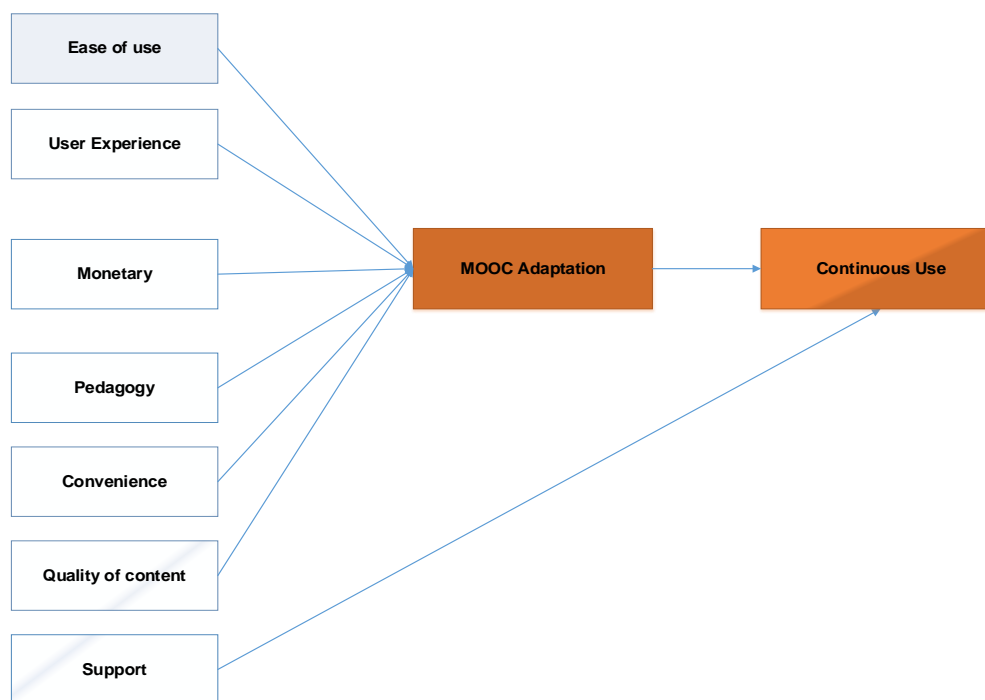


Figure 2. Conceptual Framework of MOOCs adaptation

4.1 Findings and Discussion

The findings of this research are based on the understanding path of MOOCs adaptation for several reasons from the reviews that have been taken from the use of Coursera and edX platform. From the reviews taken from sitejabber, consumer affairs and trustpilot, it is demonstrated that some learners are expressing their concerns on the technological side of the MOOC which is on the ease of use of application, thus it can be said that in order for learners to engage with online learning, the application has to be easy to use this team variable can be supported by the study of Haba, Hassan and Dastane (2017) on consumer perceived value and the technology acceptance model of Davis, (1989).

MOOC users usually expressed some points which need to be taken into consideration while using a MOOCs website which are based on user experience, pedagogy, convenience, and quality of content, support and the monetary aspect of it. These factors can be supported by the theoretical assumption of connectivism (Downes, 2008; Siemens, 2005), from the value proposition which is given by the MOOCs companies. The monetary aspect of the learners using MOOCs websites is considered as the perceived sacrifice of learners and therefore support, content quality, convenience, user experience and educational pedagogy can be seen as perceived benefits while interacting and continuously using a MOOCs website or company (Zeithaml, 1988).

5. Conclusion, Limitations and Further Research Directions

This research study has been in great amplitude in terms of understanding learners interactions with MOOCs for the purpose of improvement and it is a great contribution in the academic literature of MOOCs which can be very useful for researchers and scholars. Therefore, the themes identified in this research

study are as followed: ease of use, user experience, and monetary, pedagogy, and convenience, quality of content and support which can link to MOOCs adaptation and continuous use of MOOCs application. Thus, with the theory of Siemens (2005) on connectivism which is related to MOOCs demonstrates the role of technology has an opportunity for learning and accessing the mass audience of learners with a facilitating condition. Even though this study is going to be a great contribution in the field of MOOCs and the way learners use and intending to use the application, it is very important to understand that it may have some limitations which are based on reviews those are only limited to two MOOCs giants which are Coursera and edX. Lately MOOCs had been a very attractive field of study by scholars and researchers because it is the new form of learning. Therefore, some researchers and scholars will be undertaking some studies in order to test the variables identified in this study, some other researchers can extend this research study for the aim of selecting more MOOCs companies and widening MOOCs users with their reviews which will be a very important academic contribution in the MOOCs literature.

References

- Al-Rahmi, W. M., Yahaya, N., Alamri, M. M., Aljarboa, N. A., Kamin, Y. B., & Saud, M. S. B. (2019). How cyber stalking and cyber bullying affect students' open learning. *IEEE Access*, 7, 20199-20210.
- Andersen, R., & Ponti, M. (2014). Participatory pedagogy in an open educational course: Challenges and opportunities. *Distance Education*, 35(2), 234-249. <https://doi.org/10.1080/01587919.2014.917703>
- Andone, D. (2008, July 22-25). *Web 2.0 Technologies for Digital Students*. IADIS International Conference-Learning 2008 (part of MCCSIS 2008), Amsterdam, NL, IADIS, 287-294.
- Armellini, A., & Aiyegbayo, O. (2010). Learning design and assessment with e-tivities. *British Journal of Educational Technology*, 41(6), 922-935. <https://doi.org/10.1111/j.1467-8535.2009.01013.x>
- Bozkurt, A., Akgün-özbek, E., & Zawacki-Richter, O. (2017). Trends and patterns in massive open online courses: Review and content analysis of research on MOOCs (2008-2015). *International Review of Research in Open and Distance Learning*, 18(5), 118-147. <https://doi.org/10.19173/irrodl.v18i5.3080>
- Bozkurt, A., Ozdamar Keskin, N., & De Waard, I. (2016). Research Trends in Massive Open Online Course (MOOC) Theses and Dissertations: Surfing the Tsunami Wave. *Open Praxis*, 8(3), 203-221. <https://doi.org/10.5944/openpraxis.8.3.287>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Creswell, J. W. (2013). *Qualitative Inquiry & Research Design Choosing among Five Approaches* (3rd ed.). Thousand Oaks, CA SAGE.
- Davis, F. D. (1989a). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340. <https://doi.org/10.2307/249008>
- Downes, S. (2008). Places to go: Connectivism & connective knowledge. *Innovate: Journal of Online Education*, 5(1), 6.
- Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features from an Instructional Design Perspective. *Performance Improvement Quarterly*, 6(4), 50-70.

- Creelman, A., Ehlers, U., & Ossiannilsson, E. (2014). Perspectives on MOOC quality-An account of the EFQUEL MOOC Quality Project. *INNOQUAL-International Journal for Innovation and Quality in Learning*, 2(3), 78-87.
- Haba, H.F. & Dastane, O. (2018). An Empirical Investigation on Taxi Hailing Mobile App Adoption: A Structural Equation Modelling. *Business Management & Strategy*, 9(1), 48-72. <https://doi.org/10.5296/bms.v9i1.13006>
- Haba, H. F., Hassan, Z., & Dastane, O. (2017). Factors Leading to Consumer Perceived Value of Smartphones and its Impact on Purchase Intention. *Global Business and Management Research: An International Journal*, 9(1), 42-71.
- Hayes, S. (2015). MOOCs and Quality: A Review of the Recent Literature. *QAA MOOCs Network*.
- Hussin, S. (2012). Taylor Walsh: Unlocking the gates: how and why leading universities are opening up access to their courses. *Higher Education*. <https://doi.org/10.1007/s10734-011-9425-z>
- Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2015). Horizon Report: 2015 Higher Education Edition. In *Reading*. [https://doi.org/ISBN 978-0-9906415-8-2](https://doi.org/ISBN%20978-0-9906415-8-2)
- Li, C., & Zhou, H. (2018). Enhancing the efficiency of massive online learning by integrating intelligent analysis into MOOCs with an Application to Education of Sustainability. *Sustainability (Switzerland)*, 10, 468. <https://doi.org/10.3390/su10020468>
- Mckenna, L. (2012, May 11). The Big Idea That Can Revolutionize Higher Education. *The Atlantic*. Retrived from <https://www.theatlantic.com/business/archive/2012/05/the-big-idea-that-can-revolutionize-higher-education-mooc/256926/>
- Rice, J. A. (2007). *Mathematical statistics and data analysis*. Belmont, CA: Thomson/Brooks/Cole.
- Pedersen, S., & Liu, M. (2003). Teachers' beliefs about issues in the implementation of a student-centered learning environment. *Educational Technology Research and Development*, 51(2), 57-76. <https://doi.org/10.1007/BF02504526>
- Roblyer, M.D., & Doering, A.H. (2013). Integrating educational technology into teaching. Boston, MA: Pearson
- Satar, M., Safie, N., Dastane, O., & Ma'arif, M. Y. (2019). Customer Value Proposition for E-Commerce: A Case Study Approach. *International Journal of Advanced Computer Science and Applications*, 10(2). 454-458. <https://doi.org/10.14569/IJACSA.2019.0100259>
- Shove, E. (2003). Comfort, Cleanliness and Convenience. In *Comfort, Cleanliness and Convenience: the social organization of normality*.
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2, 3-10
- Tschofen, C., & Mackness, J. (2012). Connectivism and dimensions of individual experience. *International Review of Research in Open and Distance Learning*, 13(1), 124-143.
- United Nations Educational Scientific and Cultural Organization (UNESCO). (2014). UNESCO Education Strategy 2014-2021. *United Nations Educational, Scientific and Cultural Organization*.
- Venkatesh, Morris, Davis, & Davis. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-478. <https://doi.org/10.2307/30036540>
- Wu, B., & Chen, X. (2017). Continuance intention to use MOOCs: Integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, 67, 221-232.

<https://doi.org/10.1016/j.chb.2016.10.028>

- Zawacki-Richter, O., Bozkurt, A., Alturki, U., & Aldraiweesh, A. (2018). What research says about MOOCs - An explorative content analysis. *International Review of Research in Open and Distance Learning*, 19(1), 242-259. <https://doi.org/10.19173/irrodl.v19i1.3356>
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 52(3), 2-22. <https://doi.org/10.2307/1251446>
- Zhong, S.-H., Zhang, Q.-B., Li, Z.-P., & Liu, Y. (2016). Motivations and Challenges in MOOCs with Eastern Insights. *International Journal of Information and Education Technology*, 6(12), 954-960. <https://doi.org/10.7763/ijiet.2016.v6.824>