

What Works for Learners in MOOCs

İrem ERDEM-AYDIN

Anadolu University
Open Education Faculty
Tepebasi, Eskisehir, 26470, Turkey
ieaydin@anadolu.edu.tr

Mujgan YAZICI

Anadolu University
Open Education Faculty
Tepebasi, Eskisehir, 26470, Turkey
mbozkaya@anadolu.edu.tr

Descriptors: Massive Open Online Courses (MOOCs), Learners' Reasons to Participate, Learners' Preferences of Learning Activities and Materials

Abstract

This paper intends to reveal the results of a study that examines the relationship between the MOOC participants demographics and their reasons to take these courses as well as their preferences of the learning activities/materials. It is actually a part of a larger study that intended to reach the effective MOOCs design principles for Turkish audience. This part of the larger study focused on investigation of the Turkish MOOCs participants' reasons to take these courses and their preferences of the learning activities/materials. Total 754 learners voluntarily completed the online survey developed to collect data on these reasons and the participants demographic characteristics. The results have shown that the learners mostly take these courses to learn more about the topics they are interested in. Remarkably, very few participants noted the interaction with others as an activity/material they prefer in these courses.

Introduction

The Massive Open Online Courses (MOOCs) has been one of the major contemporary hot topics in education, particularly higher education since the first offering by George Siemens and Stephen Downes in 2008. Although they seem transforming into more self-paced, professional development and degree-oriented courses, all around the world there is still a big interest in both supply and demand sides (Shah, 2017). Latest figures reveal that currently there are more than 8000 MOOC offerings from more than 800 institutions to around 60 million users globally.

The demand, or motives for registration to MOOCs, has been studied over the last 5 years in various settings (e.g.; Agarwal, 2012; Kolowich, 2013; Rice, 2013). Studies have shown that the major motives for MOOC participants, or MOOCers are curiosity for exploring the developments in the fields of their own personal interests (Kay et al, 2013; Seaton et al, 2014), getting a better insight about what they have been doing in their jobs (Wang & Baker, 2015), experience online learning, receive a certificate, and development of their professional knowledge and skills (Yuan & Powell, 2013), requiring no prior degree or certificate to participate (Vail, 2013), learning how to design online courses as well as learning online pedagogy (Blake, 2013), having a course experience with a small or no cost (Chen, Barnett, & Stephens, 2013; Wilson et al., 2013), and taking a course from a prestigious institution, famous or well-known person (Adamopoulos, 2013). On the other hand, although MOOCs are considered as destructive innovation, a big majority of them adapts an instructional strategy: basically, consists of videos and readings as conveyors of information, limited -usually unmonitored- peer interaction, and some instructor-student interaction, quizzes and exams. Alexander and Boud (2016) claimed that didactic traditional teaching strategies have often been implemented in ODL courses and pointed to the potential of online learning being lost as a result. Is it true for MOOCs? Do the MOOCs usually employ the same didactic traditional teaching? What are the alternative instructional strategies that are more suitable to MOOCs and online courses? Does culture, in general and/or learning culture (learning habits and attitudes common in a society) has an effect on designing MOOCs?

These are among the questions we want to examine in a larger study focusing on investigating design principles for MOOCs specifically offered in Turkish. One part of this research project is about learning the Turkish MOOCs participants' reasons to take these courses, their preferences of the learning activities/materials, and relationship between these reasons and the learners' demographic characteristics.

Method

Anadolu University has been offering MOOCs in Turkish to mainly Turkish speaking audiences since 2015. AKADEMA is the name of the platform created to offer these courses. Currently there are around 80 courses, about variety of topics including science, sports, fine arts, writing skills, Turkish folk music, playing musical instruments, etc., run three times in a year in AKADEMA. This study was conducted with the participants of AKADEMA courses.

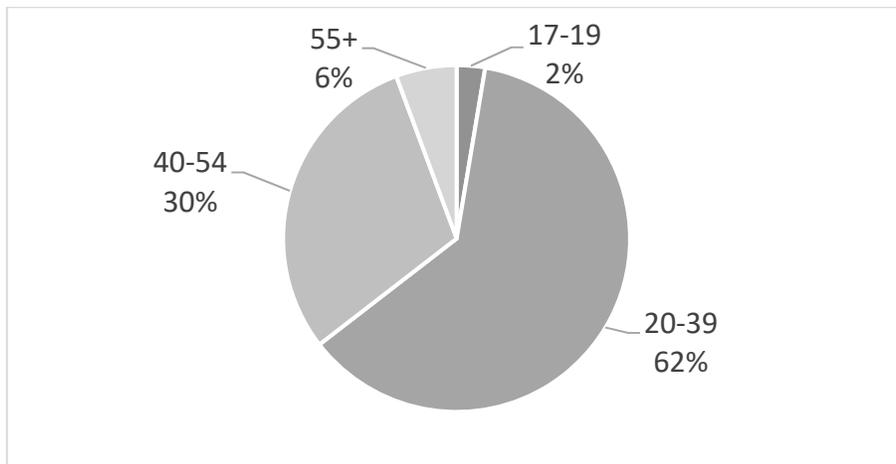
In this descriptive study, an online questionnaire was used to collect data. The related part of the questionnaire was developed based-on different previous studies about MOOCs participants' reasons or motives to take these courses, such as Milligan & Littlejohn (2017), Neuböck, Kopp, & Ebner (2015). The related part of the questionnaire provided a list of reasons (motives) for participants to indicate their reasons to attend the MOOCs and asked to indicate the most relevant top 3 reasons for them. It also included a list of activities/materials presented in MOOCs and the participants were asked to indicate their level of preference toward these activities/materials. The data collection instrument additionally consisted of questions about the learners' demographics. The other parts of the questionnaire included questions about the participants' evaluations, study habits, future plans to attend, their preferences of the topics for future, and so forth.

The questionnaire was shared with all the AKADEMA learners and kept open during 1 April – 30 May 2018. Total 754 learners voluntarily completed the online questionnaire from all over the country. Mostly descriptive statistics were used to analyze the data. Analyzes about the other parts of the study is still undergoing.

Findings

The reporting of the findings is organized according to the research variables (demographic characteristics and the participation reasons and preferences) and the cross tabulation of the findings.

Figure 1 summarizes the age range of the participants. When the table is examined, it is seen that 61.9% of the participants are in the 20-39 age range; and 29.8% between in the ages of 40-54. It is interesting to note that the percentages of the older (55-73 ages) and the younger (17-19 ages) students are quite low (5.7% older and 2.6% youngsters). Additionally, as can be seen in the table, there is not a big gap in terms of the gender. Of the 52.3% participants were female and 47.7% were male.



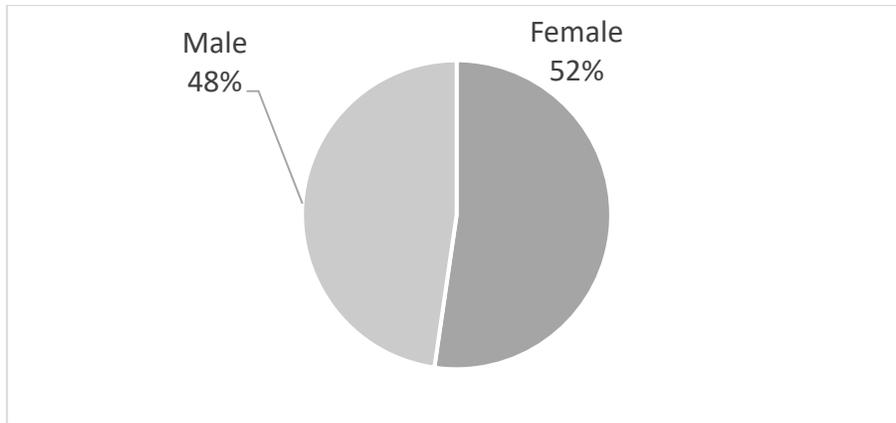


Figure 1. Demographic information for MOOC participant

Figure 2 presents the detailed data about the MOOC participants' top three reasons for taking AKADEMA courses. As can be observed, the first three statements that the participants considered as relevant, or important reason to take these courses, were 'learning more about the topics they are interested in' (90 percent), 'having a valid certificate' (68.5 percent), and 'earning a credit that may use in a formal degree program' (68.5 percent).

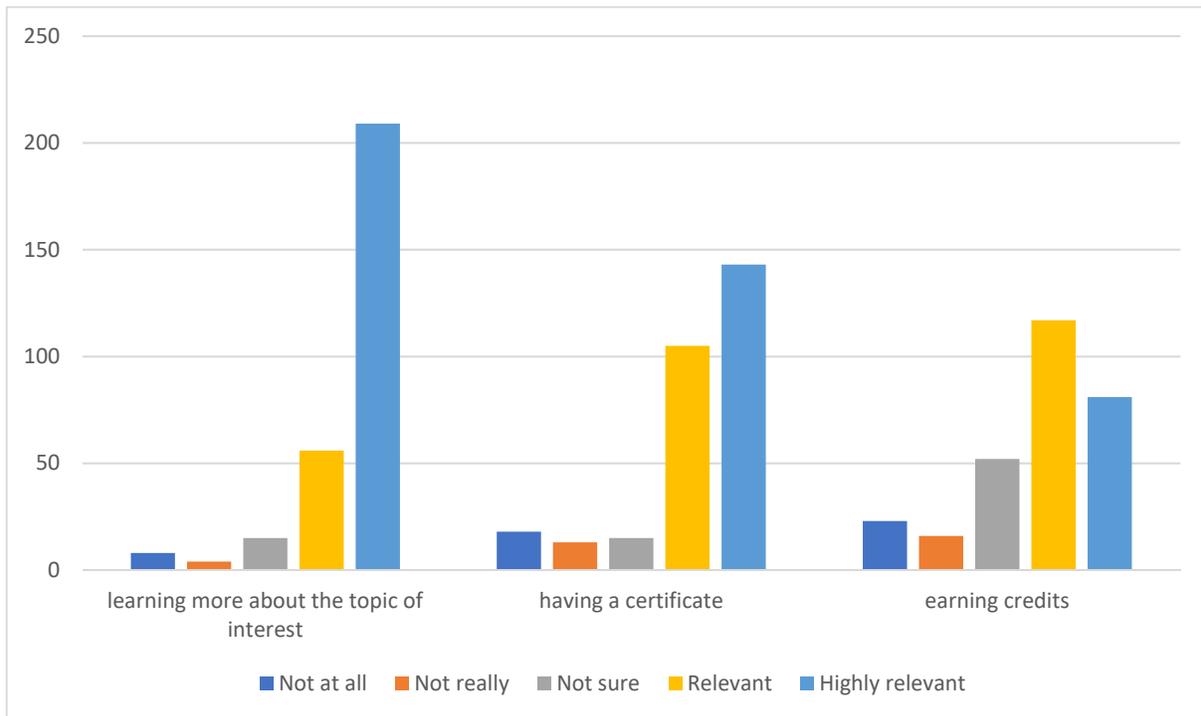


Figure 2. Top 3 reasons to participate AKADEMA MOOCs

On the other hand, figure 3 shows the participant learners' preferences of the different types of learning activities. As can be drawn from the figure, a big majority of the MOOC participants still prefers readings (87.9 percent) and videos (87.9 percent). Meanwhile the learners indicated lowest preference to the learner-to-learner interaction (49.1 percent). Interestingly, synchronous interaction with the instructors was also preferred less than others (71.2 percent).

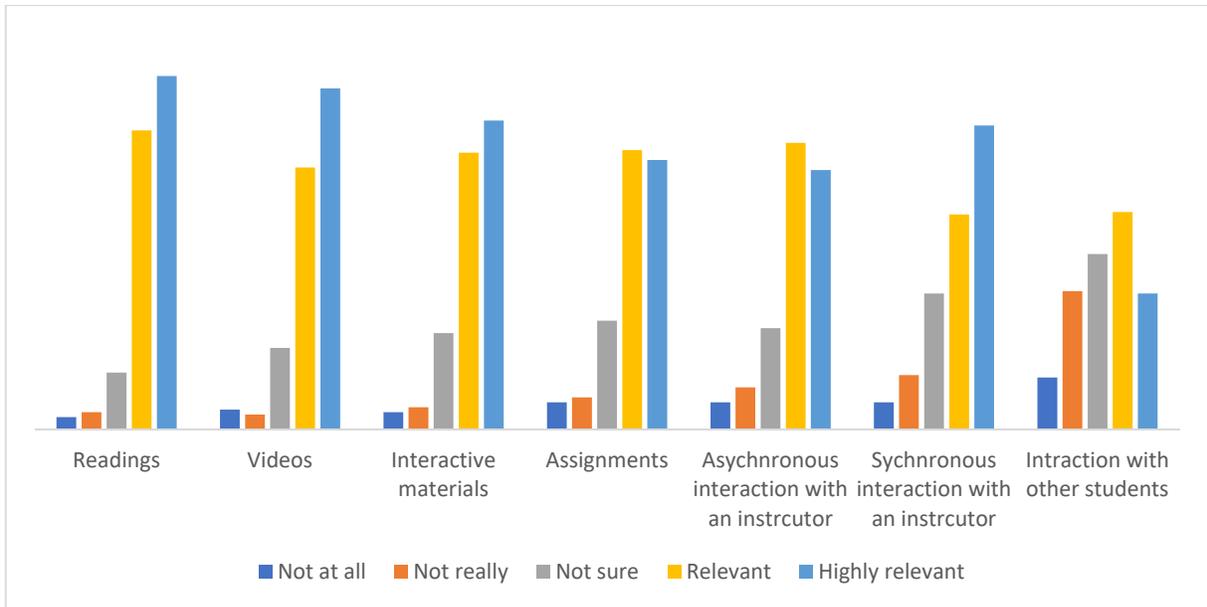


Figure 3. Learners' preferences on the learning materials/activities

Figure 4 gives some details about the top 3 reasons for MOOC participation and gender. One can infer easily that there is no significant difference between female and male students' motives. A similar finding was observed in the activity/material preferences of the female and male students. A noteworthy difference between genders was seen in the preferences of learners on learner-to-instructor interactions. Figure 5 also shows that male students are less willing to interact with the instructors either asynchronously or synchronously.

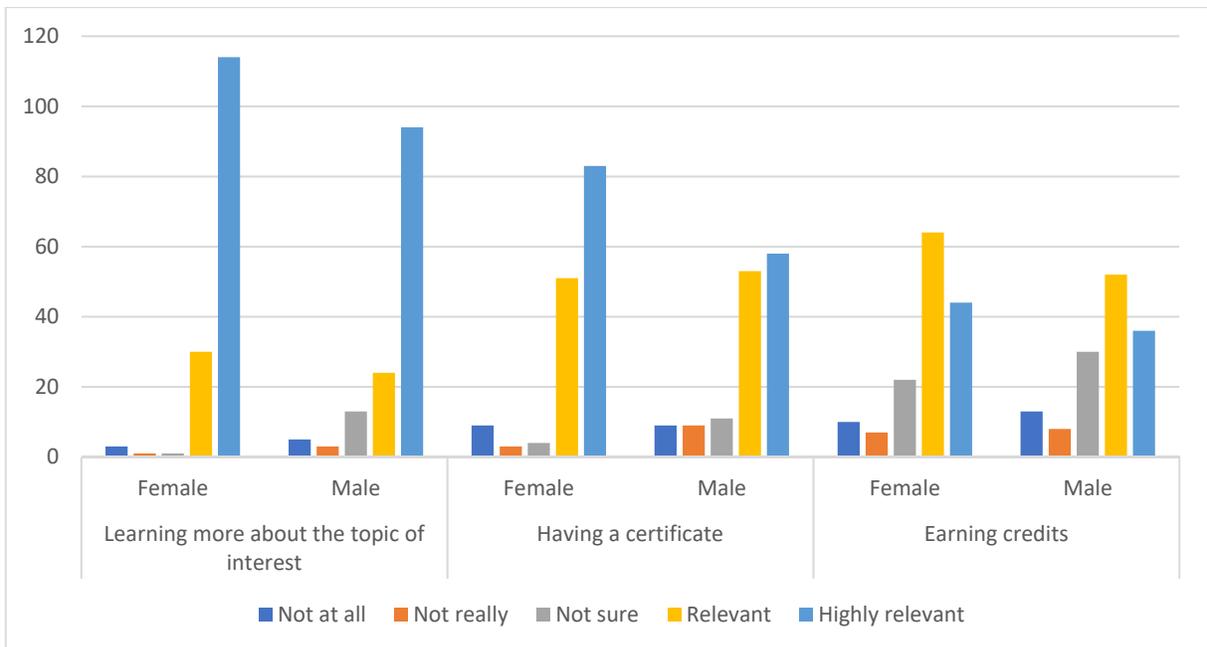


Figure 4. Gender and the top 3 reasons to participate MOOCs

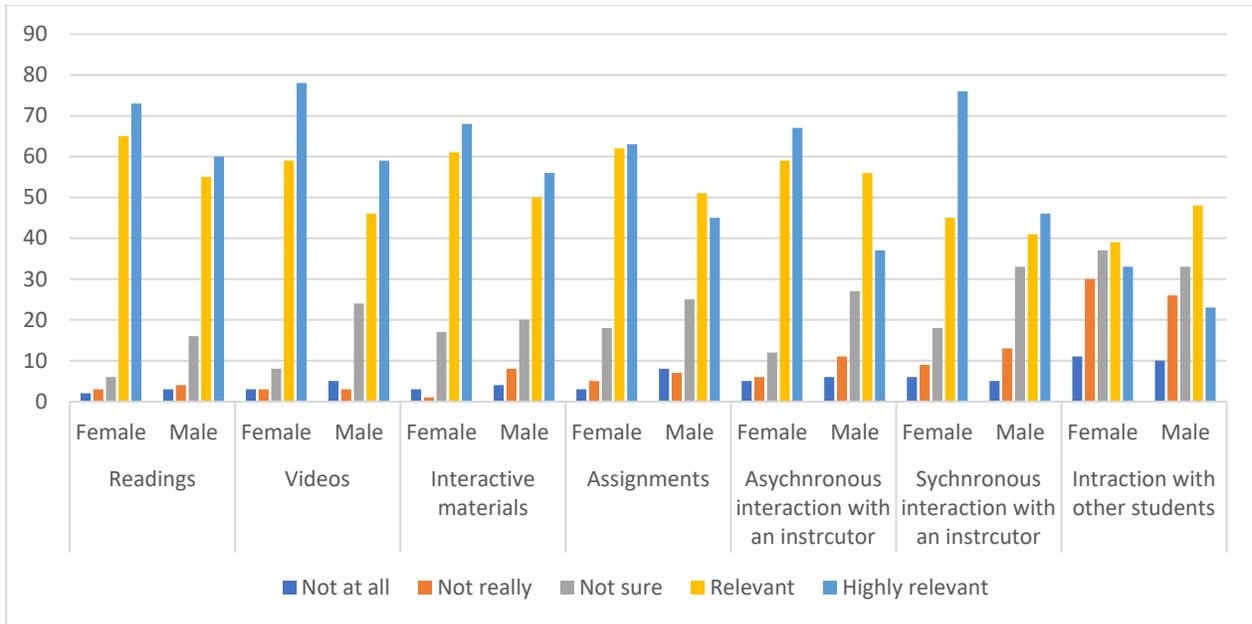


Figure 5. Gender and activity/material preferences

In terms of age groups, a great percent (90.3% relevant and very relevant answers) of those who are between in 17-19 ages indicated that the learning more about the topics they are interested in as the top reasons for taking AKADEMA MOOCs. Interestingly, all the elderly (55+) students also indicated this reason as the major reason for taking these courses. Similar results can be seen for other age groups, too.

Table 1. Age and the top 3 reasons to participate MOOCs (percentages)

Reason	Age	Not at all	Not really	Not sure	Relevant	Very relevant
Learning more about the topic of interest	17-19	6.7	0	0	20	73.3
	20-39	1.3	1.3	6.6	21.1	69.7
	40-54	1.9	1.9	25	17.2	76.4
	45+	0	0	0	0	100
Having a certificate	17-19	13.3	6.7	0	46.7	33.3
	20-39	3.9	5.3	5.3	43.4	42.1
	40-54	6.3	3.1	3.8	34.6	52.2
	45+	0	0	14.3	0	85.7
Earning credits	17-19	14.3	0	28.6	42.9	14.3
	20-39	5.4	8.1	17.6	43.2	25.7
	40-54	9.4	5	16.4	39.6	29.6
	45+	0	0	14.3	14.3	71.4

In terms of age groups and activity/material preferences of the students, all of those who are between in 17-19 ages preferred using readings and videos in their MOOCs. This group indicated peer interaction (42.8 percent) and asynchronous interaction with an instructor (71.5 percent) as the least preferred activities/material for MOOCs. Meanwhile, those who are between in 20-29 ages preferred the videos (95.7 percent) over readings (93.4) but still reading is the second preferred activity/material among this group. Similar to the previous group, this age group also indicated lesser preference of interacting with the other students (41.4 percent). However, it was interesting to notice that synchronous interaction with an instructor (67.5 percent) was lesser preferred activity/material than asynchronous interaction (76 percent). Additionally, this group also did show a lesser preference for assignments (69.7 percent). Very similar findings were observed among 40-54 years old students. They also highly preferred readings (100 percent), videos (84.8 percent) and shown less interest in peer interaction (53.1 percent) and synchronous learner-to-instructor interaction (75 percent). Finally, the elderly group shown interesting preferences although the peer interaction (57.2 percent) still indicated as the least preferred activity/material. This group has shown great interest in learning from assignments and feedback provided to their works (100 percent). Interestingly, this group also slightly preferred asynchronous interaction with the instructors (76.4 percent) over synchronous interaction (75 percent).

Table 2. Age and activity/material preferences (percentages)

Activity/Material	Age	Not at all	Not really	Not sure	Relevant	Very relevant
Readings	17-19	0	0	0	64.3	35.7
	20-39	0	0	6.7	46.7	46.7
	40-54	1.9	3.2	8.2	36.7	50
	45+	0	0	0	14.3	85.7
Videos	17-19	0	0	0	42.9	57.1
	20-39	1.3	1.3	11.8	43.4	52.3
	40-54	2.5	3.2	9.5	33.5	51.3
	45+	14.3	0	0	28.6	57.1
Interactive materials	17-19	6.7	6.7	0	40	46.7
	20-39	1.3	1.3	10.4	44.2	42.9
	40-54	1.9	3.8	12.7	38.2	43.3
	45+	0	0	14.3	28.6	57.1
Assignments	17-19	0	0	7.7	46.2	46.2
	20-39	3.9	2.6	23.7	36.8	32.9
	40-54	3.2	5.1	11.5	38.9	41.4
	45+	0	0	0	28.6	71.4
Asynchronous interaction	17-19	7.1	7.1	14.3	42.9	28.6
	20-39	1.3	6.7	16	42.7	33.3
	40-54	4.5	5.7	13.4	41.4	35
	45+	0	0	14.3	14.3	71.4
Synchronous interaction	17-19	0	7.1	14.3	42.9	37.5
	20-39	1.3	9.2	22.4	27.6	39.5
	40-54	5	4.4	15.6	30.6	44.4
	45+	0	5.3	14.3	14.3	71.4
Peer Interaction	17-19	0	35.7	21.4	21.4	21.4
	20-39	5.3	21.3	32	26.7	14.7
	40-54	8.2	17.1	21.5	32.3	20.9
	45+	14.3	14.3	14.3	14.3	42.9

Conclusions

MOOCs nowadays stand out as widespread and popular digital education applications on a universal scale. Innovative practices created by new media technologies force traditional education paradigms to change. In this context, with the development of technology, traditional education patterns are broken, and MOOCs practices appear as an alternative educational environment. MOOCs are becoming more widespread in order to make more

information available to the mass circulation and to make the courses in universities accessible and flexible for the wider audience. It would be wrong to indicate that examining the MOOCs phenome might help the governments and related institutions develop policies for effective and efficient integration of information and communication technologies into educational systems.

The goal of this study was to determine the learners' reasons for taking the Anadolu University's MOOC offerings in AKADEMA platform and their preferences of learning activities/materials. The top 3 motivation of the participants to take AKADEMA MOOCs was identified respectively as learning more about the topics of interest, having a valid certificate from a well-known institution, and earning credits that can be used in a degree program. This result supported the previous studies conducted in Turkey and all around the world. For instance, Aydemir and Çelik (2018) conducted a study to determine the reasons for joining the MOOCs and the participants of that study also stated that they took those course because they were interested in learning new things, developing themselves and being interested in the subjects of the courses they took. In another study, Aybek (2016) the same phenomenon with the 24-40 age group and found out that the learners attended the courses owing to their interest and curiosity towards the courses. Similar findings were also indicated the global MOOCs literature. Learning more or gaining more experience and knowledge on the topics of interest was identified as one of major motives for taking MOOCs in many studies, such as Agarwal (2012), Allon (2012), Belanger and Thornton (2013), Breslow et al. (2013), Evans (2012), Fini (2009), Kaul (2012), Kolowich (2013), Rice (2013), etc. Meanwhile, the literature clearly presents that learners' performance in MOOCs is highly correlated with the learners' expectations in joining the courses (Hew & Cheung, 2014; Oktal, 2013; Venkatesh & Davis 2000). This might be considered as a rational for the finding about the learners' participation to MOOCs because of learning more on the topics of interest. Additionally, theory of adult learners also indicated that adults' one of the biggest motivations towards learning is learning on their topics of interest.

In terms of learning activities/materials, it was very surprising to see readings as highly preferred activities/materials as videos even among younger students. This result might be associated with the traditional distance education background of Anadolu University. Anadolu University distance education programs and courses mainly require self-paced study and asks students learn from specially designed, written, and published textbooks although nowadays more digital media are being presented. So, the learners learn by reading their textbooks and take centralized exams in order to pass their courses. This design could be effective on the MOOCs participants' preferences of the learning activities/materials in this study since a good deal of learners in MOOCs is also distance education students.

The analyses about effects of the gender and age of the participants on their motives and preferences of activities/materials have shown no significant results. In other words, there is no significant difference between female and male students' motives. A similar finding was also observed in the activity/material preferences of the female and male students. A notable difference between genders was seen in the preferences of learners on learner-to-instructor interactions. The male students are less willing to interact with the instructors either asynchronously or synchronously than females.

In the light of the results, it was concluded that readings and videos are interestingly important activities/materials for all age and gender groups. Although MOOCs promote technology-based learning, learners continue their traditional distance learning behaviors. Even in technology-rich, technology-based learning environments, the Turkish students download the materials and study mostly printed versions of those materials. So, it can be claimed that the Turkish MOOC participants carry their traditional learning behaviors into MOOCs.

A remarkable result of this study is about the participants' preferences regarding the learner-to-learner interaction in MOOCs. It is the least preferred learning activity/material among the participants of this study. Actually, Aydemir and Çelik (2018) also found a similar result in their study. One can easily relate this result with again the previous distance learning experiences of the learners. Anadolu University as well as many other distance education providers do not focus on learner-to-learner interaction rather prefer learner-to-content interaction. So, again, the learners carry their learning habits into MOOCs in this case and prefer less peer interaction. It would be interesting to create and offer a cMOOCs to Turkish community and see the effectiveness and engagement. This result might be considered as a base while designing a MOOC for Turkish learners. Also, it is a good topic for further research on MOOCs for Turkish learners.

Another interesting result is about the earning a valid certificate from a well-known institution. Those participants who are between in 20 and 39 ages indicated this as the most relevant motive for taking AKADEMA MOOCs. This result can be correlated with the high unemployment rate among new graduates of higher education, and the raise of the informal and non-formal learning and their recognition among employers. In other words, along with a university degree diploma, certificates from well-known institutions are becoming added values for getting a job. This might be an interesting clue for MOOCs designers and providers same as above conclusion:

References

- Adamopoulos, P. (2013). *What Makes a Great MOOC? An Interdisciplinary Analysis of Student Retention in Online Courses*. In Proceedings of the 34th International Conference on Information Systems, ICIS. 2013.
- Agarwal, P.M., Bain, & Chamberlain, R.W. (2012). The value of applied research: Retrieval practice improves classroom learning and recommendations from a teacher, a principal, and a scientist. *Educational Psychology Review*, 24 (3), 437–448.
- Allon, G. (2012). Operations management: Udemty. *Chronicle of Higher Education*, 59(6), B10–11.
- Aybek, H.S.Y. (2017). Yetişkin öğrenenlerin kitlesel açık çevrimiçi derslere ilişkin görüşleri. *Açıköğretim Uygulamaları ve Araştırma Dergisi*, 3(1), 188-208.
- Aydemir, M., Çelik, E., Bingöl, İ., Karapınar, D., Kurşun, E. & Karaman, S. (2016). İnternet üzerinden herkese açık kurs (İHAK) sağlama deneyimi: AtademiX. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, 2(3), 52-74.
- Bağlıbel, M., Samancıoğlu, M. ve Summak, S. (2010). Okul yöneticileri tarafından e-okul uygulamasının genişletilmiş teknoloji kabul modeline göre değerlendirilmesi. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 7(13), 331-348.
- Blake, D. (2014). *Top Challenges Facing MOOCs*. Retrieved from <http://moocs.com/index.php/top-challenges-facing-moocs/>.
- Breslow, L., Pritchard, D. E., DeBoer, J., Stump, G. S., Ho, A. D., & Seaton, D. T. (2013). Studying learning in the worldwide classroom. Research into edX's first MOOC. *Research & Practice in Assessment*, 8, 13–25ç
- Chen, X., Barnett, D. R., & Stephens, C. (2013) Fad or Future: The Advantages and Challenges of Massive Open Online Courses (MOOCs). Retrieved from <https://www.lindenwood.edu/r2p/docs/ChenBarnettStephens.pdf>
- Evans, D. (2012). Introduction to computer science: Udacity. *Chronicle of Higher Education*, 59(6), B11.
- Fini, A. (2009). The technological dimension of a massive open online course: The case of the CCK08 course tools. *International Review of Research in Open and Distance Learning*, 10(5), 1-26.
- Jarvis, J. (2011). What would Google do? Reverse-engineering the fastest growing company in the history of the world. *Harper Business*.
- Karasar, N. (2012). *Bilimsel araştırma yöntemi*. Ankara: Nobel Yayıncılık.
- Kay, J., Reimann, P., Diebold, E., Kummerfeld, B. (2013). MOOCs: So many learners, so much potential. *IEEE Intelligent Systems*, 28(3): 2-9.
- Kolowich, S. (2013). The professor who make the MOOCs. *Chronical of Higher Education*, 59(28), A20-A23.
- Liaw, A., & Wiener, M. (2002). Classification and regression by random forest. *R news*, 2(3), 18-22.
- Li, N. & Kirkup, G. (2007). Gender and cultural differences in Internet use: a study of China and the UK. *Computers and Education*, 48(2), 301–317
- Milligan, C., & Littlejohn, A. (2017). Why study on a MOOC? The motives of students and professionals. *The International Review of Research in Open and Distributed Learning*, 18(2). <https://doi.org/10.19173/irrodl.v18i2.3033>
- Neuböck, K., Kopp, M., & Ebner, M. (2105). What do we know about typical MOOC participants? First insights from the field. In *Proceedings of eMOOCs 2015 conference*, pp. 183-190. Mons, Belgium.
- Oktal, Ö. (2013). Kullanıcıların bilgi sistemini kabulünü etkilen faktörlerin UTAUT perspektifinden incelenmesi. *H.Ü. İktisadi ve İdari Bilimler Fakültesi Dergisi*, 31(1), 153-170
- Rice, J. (2013). What I learned in MOOC. *College Composition and Communication*, 64(4),695-703.
- Seaton, D.T., Reich, J., Nesterko, S., Mullaney, T., Waldo, J., Ho, A. & Chuang, I. (2014). 3.091x Inrtoduction to Solid-State Chemistry. Fall 2012, *MITx Course Report*.
- Shah, D. (2017). A Product at Every Price: *A Review of MOOC Stats and Trends in 2017*. *Class Central*. <https://goo.gl/6xAE3y>
- Torkzadeh, G. & Van Dyke, T. P. (2002) Effects of training on Internet self-efficacy and computer user attitudes. *Computers in Human Behavior*, 18, 479-494.
- Venkatesh, V., & Davis, F. (2000). A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Vail, R. (2013). Who is afraid of a big bad MOOC? Colorado Mesa University. Retrieved from http://cmubiznews.org/uploads/facultyinsights/Vail_Who_is_afraid_of_a_MOOC_February2013.pdf
- Wang, R. B. (2015). Content or platform: why do students complete MOOCs? *MERLOT Journal of Online Learning and Teaching*, 11(1) (, pp. 17-30

- Wilson, L., & Gruzd, A. (2014). MOOCs-international information and education phenomenon? *Bulletin of the American Society for Information Science and Technology*, 40(5), 35-40.
- Yuan, L., MacNeill S., & Kraan W. (2008). *Open Educational Resources-Opportunities and challenges for higher education*. Retrieved from http://wiki.cetis.ac.uk/images70/0bOER_Briefing_Paper.pdf