

Factors for Success and Course Completion in Massive Open Online Courses through the Lens of Participant Types

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Abstract

The main purpose of this study is to investigate the factors for success and course completion through the lens of participants in a Massive Open Online Courses (MOOCs) system implemented in Turkey. Thirty-two participants were selected on the basis of purposive sampling among 5000 enrolled users from 10 MOOCs, who were then classified into 3 types –lurking, moderately active, memorably active– based on their participation rate in the course activities. The data were collected via the use of two semi-structured interviews. According to the findings, the factors for success in MOOCs to the participants were divided into three categories: instructor effectiveness, course design, and personal factors. As to the factors for course completion, the categories identified were the instructor, course design, personal factors, technical issues, and affordability/clarity. The findings regarding success and course completion were discussed in detail and recommendations were provided to enhance participation in MOOCs.

Keywords: open and distance education, massive open online courses (MOOCs), success factors, course completion.

Introduction

The integration of new technologies through the use of specific online platforms developed is becoming widespread in education; however, due to the higher costs of developing these e-learning platforms, only a small number of people can access them. In this regard, Massive Open Online Courses (MOOCs) have emerged to address this raising issue by improving accessibility.

MOOCs as a concept was first introduced by George Siemens and Stephen Downes when they opened an online course, “*Connectivism and Connected Knowledge*”, and, as the courses in MOOCs are open and free of charge, they are unique in the system compared to the other courses (Yuan & Powell, 2013). Specifically, there are two types of MOOCs: Connectivist Massive Open Online Courses (cMOOCs) and Extended Massive Open Online Courses (xMOOCs) (Lin & Zhang, 2014; Liyanagunawardena, Adams, & Williams, 2013; Yuan & Powell, 2013). cMOOCs, are semi-structured online practices where the instructors work as a mentor or model to reinforce the learning of participants. Student-student and student-teacher interaction are important in this process since the participants are the creator of the content (Hollands & Tirthali, 2014; Lin & Zhang, 2014; Liyanagunawardena et al., 2013; Yuan & Powell, 2013). On the other hand, xMOOCs, which is the

type implemented in the research setting of this study, are structured on the basis of online practices where instructors are the subject-matter expert and organize the course content depending on the curriculum. Participants take a passive role and receive the information. An xMOOC consists of formative and summative evaluation and the platforms encourage the interaction between teacher-student, student-student and student-content (Conole, 2013; Hollands & Tirthali, 2014; Lin & Zhang, 2014; Yousef et al., 2014).

Researchers have been investigating the factors affecting learners' participation to open and distance learning environments for a long time. Several articles reported the high level of drop-out rates and regarded it as a problem in distance education courses (Nistor & Neubauer, 2010; Park & Choi, 2009; Yukselturk & Inan, 2006). Regarding MOOCs, the two points similarly discussed in the literature are course completion and success. The course completion in MOOCs refers to the fulfillment of course activities (Kizilcec, Piech & Schneider, 2013; Morris, Finnegan & Wu, 2005) and is divided into two categories: successful or unsuccessful completion (Morris et al., 2005). Success in MOOCs, on the other hand, refers to the completion of the tasks, scoring satisfactory grade from measurement and evaluation practices and earning a certificate (Breslow et al., 2013). In this aspect, as the number of MOOCs grows and, as a result, the number of users enrolled in the courses has increased as well (DiSalvio, 2012; Onah, Sinclair & Boyatt, 2014), these two phenomena, success and course completion, have become the common concerns of studies focusing on MOOCs. The relevant literature puts that, although many people register for the courses, only about 10% of participants complete the courses (Jordan, 2014; Liyanagunawardena et al., 2013; Rai & Chunrao, 2016). According to a study by Ho et al. (2014), 35% of the users enrolled in the courses did not participate in any activities related to the course; 56% of them engaged in less than half of the course activities, and about 5% of them completed the activities and earned a certificate. In another study, only 7% of the 55,000 users enrolled in the Software Engineering course offered via Coursera by the University of California Berkeley were reported to have completed the course (Yuan & Powell, 2013). These findings suggest that course completion and success rates are very low in MOOCs. Moving on these data, research studies in the literature have distinguished MOOC users in terms of their participation rate in the course activities. According to Hill (2013), there are five types of participants in MOOCs: no-shows, observers, drop-ins, passive participants and active participants. Similarly, de Waard et al. (2011) categorize users as lurking, moderately active, and memorably active participants.

Many post-secondary institutions are now offering MOOCs but these courses tend to have a high percentage of non-completers as well (Ho et al., 2014; Jordan, 2014; Rai & Chunrao, 2016). Although the reasons behind the dropout rates in MOOCs have been discussed in a number of studies (Liyanagunawardena, Parslow, & Williams, 2014; Onah et al., 2014), it is rare to find research studies focusing on the factors for success and course completion in MOOCs, especially from learners' perspectives. Hence, in addition to the reasons for drop-out, it is also critical to investigate the decisions of learners pursuing distance education. Consequently, the current study will explore success and course completion issues from participants with different characteristics to put a further explanation of the facts behind learners' success and course completion in MOOCs. Revealing these factors can help prevent existing MOOC structural shortcomings and design high-quality courses that can enhance participation; thus allowing successful and sustainable implementation of MOOCs.

Purpose of the Study

This study aims to explore the factors for success and course completion through the lens of different participant types who completed a course and received certificates in an xMOOCs program in Turkey. On this basis, the following research questions guide the study:

1. What are the factors for success in MOOCs through the lens of different participant types?
2. What are the factors for the course completion in MOOCs through the lens of different participant types?

Method

The design of current research was qualitative paradigm based case study design (Stake, 1995; Yıldırım & Şimşek, 2008); particularly, an instrumental case study (Stake, 1995) was used to accomplish in-depth analysis related to the factors affecting participants' success and course completion.

Research Setting and Participants

This study was conducted in AtademiX, which is one of the first examples of a MOOC in Turkey. The AtademiX initiative, founded by Atatürk University, as an example of the effort to provide an education of high quality in MOOC (Aydemir et al., 2016). AtademiX can be considered as an example of xMOOC in regard to not only using instructional design processes as a base in course design but also including courses with a syllabus and start and end dates. AtademiX accommodates courses appealing to different interest groups and does not require any prerequisites or criteria. Up to now, sixteen courses have been managed in AtademiX from different areas of expertise (AtademiX, 2017; Aydemir et al., 2016).

The participants in this study were selected among 5000 enrolled users from 10 courses in AtademiX. Criterion sampling (Büyüköztürk et al., 2008), one of the purposive sampling methods (Patton, 1997), was utilized to select the participants. While the criteria were to have a certificate from an AtademiX course to investigate the factors affecting the success of participants, the criteria for course completion were to fulfill the requirements of at least one course in AtademiX.

Participants were selected based on the logs of AtademiX. Moreover, every activity attached to the course was considered in the logs such as viewing documents and videos, submitting assignments, attending forums, or taking quizzes and final exams. The number of activities that they completed in a course was counted to categorize the level of involvement. Accordingly, participants were divided into three categories: Lurking, Moderately Active, Memorably Active Participants. The reason why we utilized these categories in the present study is that it is comprehensive enough to define the participant types in the AtademiX context. Besides, some research studies (Bozkurt & Aydın, 2015; Honeychurch et al., 2017; Stephens & Jones, 2014) also adopted these categories in different types of MOOC to describe the participant types. In this direction, while those who were involved in less than 50% of the course activities were considered in the first category, the ones who participated in between 50% and 65% of the course activities were considered in the second category. Similarly, the participants fell into the third category if they were involved in more than 65% of the course activities. In this way, the factors affecting the completion of the courses were examined according to the participant types and suggestions, and guidance would be made accordingly. The characteristics of the participants are provided in Table 1.

Table 1. Characteristics of Participants

Type of Participant	Male	Female	n
Lurking Participants	5	2	7
Moderately Active Participants	6	4	10
Memorably Active Participants	7	8	15

Data Collection and Instruments

Two semi-structured interview forms prepared by the researchers were used to collect data. The first one was for successful participants and the second one was for participants who completed the course. In order to ensure validity and reliability, the interview questions were first checked by another doctorate student at the Department of Educational Technology and a language expert and then finalized by four experts. The following are the primary questions asked in the interviews apart from the prompt questions to elaborate on the participants' views during the interview and demographic questions. The questions indicating with star signs were included in both forms.

- *Have you ever taken a MOOC before and been successful?
- *What was your purpose to attend the AtademiX course?
- *When we reviewed the logs of the AtademiX, we saw that you have completed some/more than half/most of the course activities? What made you complete the course activities?
- What influenced your success in the course?
- *What features would you like to have in a new AtademiX course to be able to complete course activities easier?
- What features would you like to have in a new AtademiX course to be more successful in the course?

To conduct the interviews, the participants were first contacted via email and phone and then an appointment was arranged from them. While 31 participants joined the interviews on the phone, only one participant attended the interview face to face. The participants were called by phone at the time of the appointment. Then, the interview questions were asked and their answers were recorded accordingly. The interviews were conducted in the native language, which is in Turkish, of both researcher and participants.

Data Analysis

Maxqda-12 was used to analyze the interview data by using the content analysis procedures (Büyüköztürk et al., 2008; Yıldırım & Şimşek, 2008). According to Büyüköztürk et al. (2008), the content analysis is described as a scientific approach that investigates the truth by classifying the verbal or written materials and converting into the numbers to provide in-depth understanding. In this direction, the recorded interviews were first transcribed verbatim. Then, data reduction and data display phases were implemented. Lastly, conclusion drawing/verification phases were followed to complete the content analysis. Besides, two experts with a decent research background in the field of MOOCs helped to code and develop themes. During the experts' review, they checked each finding, code, and themes.

Credibility and Trustworthiness

In qualitative research, the concepts of credibility, transferability, consistency, and confirmability must be established in order to ensure the validity and reliability of the data (Miles & Huberman, 1994; Patton, 2001). In this study, credibility involved the collection of the data based on voluntary participation, the analyses of data by two experts, giving direct quotes from participants, and providing the inter-rater reliability score. Miles and Huberman's (1994) formula was used to calculate the inter-rater reliability scores.

$$\text{Reliability} = \frac{\text{Number of agreements}}{\text{Number of agreements} + \text{Number of disagreements}}$$

According to the above formula, the scores were found to be 77%, 81%, 75%, 76%, 75%, and 77% which were appropriate in terms of reliability since they were above 70% (Miles & Huberman, 1994). As for the transferability, the reasons why research methods were chosen, the characteristics of the participants and why they were selected as a sample in the study, data collection instruments, and analyses of the data were explained. While interview data was reviewed by experts to ensure the consistency, raw data and codes were kept for confirmability.

Findings

The Factors Affecting Participants' Success in MOOCs

The factors affecting success in MOOCs mainly stemmed from course design, as well as a range of personal factors related to the participant and the style and effectiveness of the course instructor. Of the 32 participants, 27 individuals successfully completed the courses. All the analyses were made in line with the data collected from those 27 individuals. The results of the analysis are presented in Table 2.

Table 2. The Factors Affecting Success in MOOC

Theme	Category		<i>n</i>	<i>f</i>	%
Course Design	Course Planning		12	13	4
	Interaction with participants		9	9	6
	Accessibility		5	5	5
	Flexibility		2	2	2
	Technical factors		2	2	4
	Being free of charge		1	1	1
Personal	Internal	Prior knowledge	14	14	5
		Interest	3	3	4
		Desire	2	2	1
	External	Fulfilling course requirements	24	31	5
		Online course experience	3	3	5
		University factor	2	2	1
		Certificate	1	1	1
Instructor	Teaching Style		11	11	8
	Professional Knowledge		6	7	4

f = Code Frequency, *n* = Number of Participants, % = the percentage of each code against the total number of words in the interview

Course Design. As shown in Table 2, participants said that their success in MOOCs was mostly affected by course planning (course structure, design, syllabus, clarity, etc.). In this regard, participants

mentioned the clarity of course content, having a comprehensive course syllabus and the amount of interaction with the instructor. One of the participants said that *“...a bit of a struggle happened because everything was so clear. The rest was my responsibility, so I fulfilled my responsibility and that brought me success...”*. One can see from the above quote that a well-planned course can help participants put in less effort and become successful.

Interaction with participants is the second most commonly indicated factor. Participants stated that interacting with other participants and seeing their posts and comments contributed to their success. Accessibility was another factor after the interaction. In this regard, participants said that keeping the course content on the internet and being able to access them anytime and anywhere helped them succeed in the course. One of the participants said *“of course, being able to see the course content online and using it to study for exams helped me succeed.”*

Within the scope of the flexibility category, the research participants noted that having courses online made attending courses easier for people who are not able to attend in-class sessions and thus contribute to their success. Regarding technical factors, the participants stated that the absence of technical problems and the provision of instant technical support affected their achievement. Lastly, the least mentioned factor was that the course was free of charge. Since the courses were free of charge, participants did not experience financial limitations.

Personal factors. In addition to the course design, personal factors were also influential on participants' success. Personal-related factors divided into two categories: internal and external. Among the internal factors, prior knowledge was the most mentioned category. Participants expressed that having prior knowledge regarding the topic affected their success in the course. One of the participants said *“So I know a bit of knowledge about the field. I was more prepared because I had prior knowledge. I thought it was because of my previous experience. Because I already have information ...”*. Thus, possessing prior knowledge can help facilitate course-related activities and contribute to the success of participants.

The other most mentioned factor in the internal factors was the participant's interest and willingness to complete the course. Participants stated that interest in the course topic and feeling as a necessity for completing the course affected their success.

When external factors were examined, participants attributed their successes to the fulfillment of the course requirements. According to participants, the factors such as doing assignment/homework, participating in discussions, etc. were the reasons for positive impacts on their success. The external factors that were least discussed as having an impact on participants' success were prior online course experience, provision of courses by favorite universities, and earning an official document.

Instructor. Instructor-driven factors were expressed to influence participants' success. It was frequently expressed that instructors' subject matter knowledge and teaching style affected participants' achievement. In this regard, participants expressed that teaching course content clearly, giving feedback and having content knowledge are influential on their success. One participant expresses this point as *“... I can say that it is very important instructors have a lot of information on the topic and can transfer the information in a good way ... The rest is my responsibility and I fulfilled my responsibilities and was successful.”* As expressed, participants' success can be enhanced when instructors have adequate knowledge of their subject and the capability of clearly conveying the knowledge to their students.

The Factors Affecting Online Course Completion with Respect to Participant Type

The results of the analyses culminated with five groups of factors and each factor group were accompanied by several codes. All participants were included in this research question since the successful ones completed the course at the same time.

Affordability/Clarity. As indicated in Table 3, lurking (LP), moderately active (AP), and memorably active participants (MAP) stated that affordability, openness to everyone and not having any pre-requisites influenced them to enroll in and subsequently complete the course. In addition, the same three participant types attributed their completion of a MOOC to the usefulness of the platform.

Technical. Regarding technical factors, participants mentioned that user-friendliness impacted the likelihood of completing a MOOC. Not having any technical problems and the simplicity of the webpage encouraged participants to complete the course. As indicated in Table 3, LP, AP, and MAP made similar remarks regarding this factor. One of the participants said “*...It wasn't difficult. I mean it was easy to use it. That had a positive impact on my completion.*”

Instructor. Regarding the instructor-related factors, participants especially expressed the importance of instructors' behavior and teaching styles. While APs and MAPs often pointed out the effectiveness of an instructor's teaching style and attitude, the same factors were less commonly expressed by LPs. The teaching style was the most commonly specified factor by participants. MAPs mentioned the influence of teaching style on course completion more than both LPs and APs.

Personal. Personal factors were divided into two groups as indicated in Table 3: internal and external factors. Internal factors that were described by participants to have effects on the course completion were: willingness to learn the course topic, interest in the topic, prior knowledge related to the topic, self-efficacy (finishing the job once started, believing in their abilities), and gaining new information by refreshing prior knowledge. Among the internal factors, the most expressed one was 'prior knowledge', whereas the least mentioned was 'curiosity.' One of the participants said “*I took a first-aid seminar for basic life support in the school before which had a huge impact on completing the lesson.*”

The external factors that had a positive effect on the course completion included having enough time to do the course tasks, not experiencing technical problems, earning a certificate, the prospect of benefiting from the course, and participation of friends in the course. Among these factors, the most mentioned one was 'time,' the least referred was 'friend.'

Table 3. The Factors Affecting Course Completion in MOOC According to Participant Type

Category	Factors		LP	AP	MAP	f	%
			N	N	N		
Affordability/Clarity	Clarity		7	10	12	29	4
Technical	Usability of MOOC		4	3	4	12	3
Instructor	Behavior		3	8	7	20	6
	Teaching Style		2	4	12	21	5
	Content Knowledge		1	3	2	6	5
	Recognition of Instructor		2	0	2	4	4
Personal	Internal	Prior Knowledge	5	7	7	19	5
		Interest	2	2	8	13	7
		Self-efficacy	1	4	4	12	4
		Learning	0	4	3	8	8
		Refresh Prior Knowledge	1	1	1	3	7
		Curiosity	0	0	1	1	6
	External	Having Time	6	10	10	36	5
		Technique	1	5	3	10	7
		Benefiting	2	3	3	9	4
		Certificate	2	3	1	7	3
		Need	2	2	1	5	2
Friend Factor		0	1	0	1	4	
Course Design	Flexibility	Unlimited Time	0	0	3	4	3
		Being Distance	0	0	2	3	2
	Context	Enjoyment -Expectation	4	9	8	25	3
		Up-To-Date	6	5	4	16	3
		Difficulty Level	3	3	1	7	2
	Structure	Course Length	3	7	5	15	5
		Planning	2	1	5	8	2
		Participant Age Level	2	1	0	3	3
		Feedback	0	0	2	3	7
		Voluntary Participation in the Course	0	0	2	3	5

Lurking Participant = LP, Moderately Active Participant = AP, Memorably Active Participants = MAP, f = Code Frequency, N = Number of Participants, % = the percentage of each code against the total number of words in the interview

Course Design. Course design-related factors were divided into 'Flexibility,' 'Content' and 'Structure.' Regarding flexibility, it was stated that the provision of access to the courses over the internet without constraints of time drove participants to complete the course. While many participants expressed having 'unlimited time,' a few participants mentioned about 'being distance' as a factor influencing their course completion. One of the participants said *"I see the benefit of being accessible from anywhere on the Internet. Because one day I had forgotten my lesson and I was outside. I could go straight to a cafe. That also gave me great pleasure ..."*

When the factors derived from the course content were examined, it can be seen that the enjoyment of the courses, meeting participants' expectations, up-to-date course content, and difficulty level of the course affected course completion in MOOCs. Additionally, the planning and length of the course, participants' age levels, provision of immediate feedback and giving of the course voluntarily were the course structure-related factors. Compared to the length of a course, less number of participants noted age level, feedback, and giving of the course voluntarily as factors. In summary, the factors affecting course completion were compared in terms of participant types in Table 4.

Table 4. Comparison of Factors Affecting Course Completion in MOOCs with Respect to Participant Types

	LP		AP		MAP	
	MSF	N	MSF	N	MSF	N
Clarity	√	7	√	10	√	12
Behavior			√	8	√	7
Teaching Style			√	4	√	12
Learning			√	4	√	3
Prior Knowledge	√	5	√	7	√	7
Interest					√	8
Time	√	6	√	10	√	10
Being distant					√	2
Unlimited time					√	3
Enjoyment -Expectation	√	4	√	9	√	8
Course length	√	3	√	7	√	5
Feedback					√	2
Difficulty level	√	3	√	3		

Lurking Participant = LP, Moderately Active Participant = AP, Memorably Active Participants = MAP, N = Number of Participants, MSF = Most Stated Factor

As can be seen in Table 4, the most expressed factors that affected course completion for MAPs were clarity, instructors' teaching style, and adequate time to do course tasks. Similarly, enjoyment-expectation, instructors' teaching style, and clarity were the most mentioned factors referred to by APs to affect the completion of an online course. LPs did not mention learning, unlimited time, the distance of the course, and feedback. As a result, while the MAPs dealt with the factors related to

the essence of learning, LPs generally considered external factors. This could be considered as an important finding of the study because it provides critical information to enhance the participation in MOOCs by revealing the factors in regard to the considerations of participants.

Discussion of Findings

The Factors Affecting Participants' Success in the MOOC

This study culminated with the identification of three main factors affecting participants' success in MOOCs. These three factors are related to course design, personal, and instructor.

Course design seems to be the most important factor affecting success in MOOCs. The findings of the study indicate that participants' success is enhanced when the course level suits the participant level, the course materials are clear and understandable, the course can be accessed anywhere and anytime, student-instructor interaction is established, and the infrastructure is well structured. It could be stated that since many participants are familiar with conventional education, they might prefer to see these factors in online education as well. In this direction, Loizzo and Ertmer (2015) stated that course design affects achievement. They pointed out that clarity of the course materials and being able to access them via different mediums affects achievement in MOOCs. Similarly, Wright (2003) expressed that quick access to course materials, appropriateness of course content with the target group level, and presentation of the course contents according to participant goals and in a logical sequence should be done for the course design in MOOCs.

Student-student interaction is another course design factor found to have an impact on achievement. Participants stated that receiving help from their peers and exchanging their ideas affected their achievement. AtademiX courses were designed as an interaction-based to facilitate student-student interaction (AtademiX, 2017). Therefore, the emergence of this factor might stem from the features of course design. A number of studies have also underlined the importance of interaction among students as an ingredient for success in the MOOC (Brooker et al., 2018; İbicioğlu & Antalyalı, 2005; Koutropoulos & Hogue, 2012; Loizzo & Ertmer, 2015; Soong et al., 2001). Consequently, designing online courses which can enhance interaction among participants and offer collaborative activities can promote participants' achievement in the MOOC.

In addition to the factors derived from course design, personal factors also affected the success of participants. Personal factors can be categorized as internal and external factors. Of personal factors, the most crucial one is having prior knowledge. Previous studies indicated that having prior knowledge facilitated participants' learning (Bosker, 1999; Kiamanesh, 2004; Senemoğlu, 2005; Papanastasiou, 2000; Zhou, 2017). According to Gagne's teaching model, meaningful learning occurs when new information is built upon previously learned information (Smith & Ragan, 2000). In this respect, having prior knowledge can affect the success of participants. In previous studies, prior knowledge was also found to be one of the factors affecting success in the MOOC (Belanger & Thornton, 2013; Demirci, 2014). Therefore, having prior knowledge of the subject matter can be considered as an important factor in participants' success in the MOOC.

In this study, interest was found to be another factor affecting success. Participants said that the trending topics and the content related to their fields triggered their interests towards the course and hence influenced their success. It was stated in previous studies that students' interests and needs must be met for effective learning to take place (Seven & Engin, 2008). Therefore, preparing the trending topics that are relevant to the participants' fields might be an important drive for success in the MOOC.

Regarding the external factors, it was revealed that the fulfillment of course requirements and active participation in the tasks had a great influence on participants' success. Hence, motivating participants to fulfill the course requirements and supporting them in this process can help them successfully complete the course (Deshpande & Chukhlomin, 2017; Lee & Choi, 2011).

Lastly, the findings indicated that the instructor can play a considerable role in participant success. The instructor's teaching style and knowledge of the content can affect the participants' success. This finding is also corroborated by another study (Kassabian, 2014). Accordingly, the provision of the online courses by instructors who are well-known and experts in their fields can attract participants' attention and then contribute their success in the MOOC.

The Factors Affecting Online Course Completion with Respect to Participant Type

In the present study, the factors affecting course completion were explored and found that there were five categories: affordability/clarity, technical, instructor, personal and course.

In this study, it could be said that the course being online is one of the most important factors in affecting course completion because there is no cost and it is accessible to everyone. Since the free online courses foster participation (Hew & Cheung, 2014) and tuition fees are the main reason why distance education students drop out the school (Esgice, 2015), it could be said that this is an important factor affecting course completion in the MOOC.

Related to the technical factors, participants attributed the completion of online courses to easy use of website and lack of technical problems. According to Norman's gulf of evaluation (Norman, 1988), the distance between the expectations of users and the representations of the system should be small so that users can do what they intend to do. Hence, providing platforms that match the way users think can increase the completion rate. Similarly, Morrison (2014) concluded that one of the three factors that negatively affected the course completion rate in the MOOC was the technical factor. Since the technical problems can decrease the motivation of participants (Hew & Cheung, 2014), providing robust technical infrastructure and easy-to-use platforms can contribute to the course completion rate in the MOOC.

Regarding instructor-related factors, participants attributed course completion to not only instructors' attitudes, content knowledge, and teaching style but also their acquaintance with instructors. Previous studies indicated that instructor performance affects the motivation and academic success of the learner (Göçer & Deryakulu, 2004; Tatar, 2005) and learners tend to take a course from well-known and expert instructors (Kassabian, 2014). Therefore, it can be concluded that having decent content knowledge in their field, demonstrating a positive attitude toward participants and teaching styles of instructors are important factors which can help participants complete online courses.

In the present study, personal factors were found to be another important element affecting course completion in the MOOC. Personal factors are divided into internal and external factors. Regarding the internal factors, it was found that participants completed the course to learn something. The findings indicated that this factor was most often mentioned by APs and MAPs. Since APs and MAPs are more motivated to learn and thus more involved in course activities, they might have mentioned these factors more than LPs. In this direction, Hew and Cheung (2014) stated that learning is one of the reasons for individuals to participate in MOOCs. Similarly, Vázquez, Ramirez-Montoya, and González (2018) expressed that completers in MOOCs have more motivation at the beginning of the course. Therefore, determining the initial motivations of participants can help to prepare remedial interventions.

The other internal factor influencing course completion was found to be willingness. Participants stated that interest in subject matter and willingness to take the course encourage them to complete

the course. This factor can be related to learning motivation. In this respect, it can be said that the high motivation of MAPs can lead them to emphasize more about the effect of the willingness-interest factor on their course completion. Wang and Baker (2015) expressed that the tendency to complete the course is related to the interesting course content. Similarly, self-efficacy has been identified as another factor affecting course completion. This factor is expressed more by APs and MAPs. It can be noted that the high levels of self-efficacy might stem from the high motivation to learn and interest levels of APs and MAPs.

Regarding external factors, time is the most important factor affecting course completion. Participants stated that having sufficient time encouraged them to complete the course. According to the findings, this factor has been found to affect all participant types similarly. In this direction, Jordan (2014) pointed out that participants' course completion rates were positively related to time. Loizzo and Ertmer (2015) found that it was one of the factors preventing participants from completing the course. Lukes (2012) expressed that people drop out the course because of time constraints. On the other hand, the participants also said that time constraints are influential on the course completion but not success. This might stem from the participants who take only course completion exams and earn a certificate. Since they do not engage with all of the course activities, time may not be an issue for them.

Another factor influencing course completion was the course design. The factors derived from course design are divided into flexibility, content, and structure. Regarding flexibility, it was determined that being online and not having specific times to attend the courses are important factors for MAPs because they might ask to learn anytime and anywhere depending on their needs.

Regarding content-related factors; it was seen that the most important factor influencing the participants' course completion was the enjoyment of the course activities and meeting participant expectations. All three types of participants mentioned this factor in a similar way. In this direction, Hew and Cheung (2014) said that the participants' motivation to attend the MOOC is reduced when the expectations of individuals are not met. Alraimi, Zo, and Ciganek (2015) stated that enjoying the course encourages participants to complete the course. Similarly, Loizzo and Ertmer (2015) noted that course enjoyment and meeting the expectations of participants influenced course completion. In this study, it can be said that the emergence of participants' reference to this factor might be due to the well-structured AtademiX courses. Therefore, implementing instructional design principles when planning the courses can help participants enjoy and complete the courses.

When the course-related factors are examined, participants mostly emphasized the length of the course and said that the long length of the course negatively affects course completion. APs commonly mentioned this factor. In this direction, Goldberg et al. (2015) reported that low completion rates were associated with a long course duration ranging from 5 to 25 weeks. Jordan (2014) stated that the course completion rate is negatively correlated with the duration of the course. Therefore, it can be concluded that it is important to determine the optimal length of the courses so as not to adversely affect the participants.

Lastly, regarding the importance of feedback on learning (Hattie & Timperley, 2007) which is also another factor derived from course structure in this study, it was found that providing immediate feedback to participants' assignments and questions influenced course completion. This factor has been underlined only by MAPs. This might stem from the learning motivations of MAPs since the inclusion of more of the learning activity may have created a need for feedback. As these participants seek higher quality learning experiences, they are more likely to be affected than other participants. Therefore, immediate and comprehensive feedback on the courses can positively affect participation.

Conclusion and Implications

The present study has merit for a better understanding of the factors affecting MOOC participants. Although there are research studies in the literature that explored some of the factors affecting participants in distance education environments, this study investigated all possible factors through the lens of participant types in a MOOC context. Therefore, the present study provided evidence from participants' perspectives to further elaborate on the factors affecting their success and course completion. In this direction, the present study has many conclusions and implications which can guide the institutions and educators who perform MOOC applications. First, the present study categorized the participants based on their involvement in course activities to further identify the success and course completion factors in a MOOC context. Hence, administering diagnostic surveys at the beginning of the course can help identify participant types and accordingly precautions can be taken to increase the success in MOOC. For example; in order to motivate LPs, a clearly defined syllabus can be provided, the difficulty level can be stated and guidance can be done to inform them how to study during the course. Statements about the learning process can also be made to motivate participants in the process as well. In addition, a certificate of participation helps individuals to stay motivated and attend the course activities. A certificate, hence, must be given to participants in order to ensure their continuous participation. Therefore, it is important to consider these factors to promote the motivation of the participants in the MOOC.

Second, the present study revealed that the interaction is one of the crucial elements in the MOOC. Although the research studies in the literature also state the importance of interaction in distance education and blended learning environments (Kayaduman, 2020; Mason, Shuman & Cook, 2013; Zainuddin & Attaran, 2015), this study expands this pool of knowledge for MOOC context. Furthermore, considering the participants who can learn from their peers and instructors, it is important to develop interaction-driven MOOC to facilitate student-student and student-instructor interaction. Besides, the instructors should also design course activities to encourage interaction between student-student and student-instructor so that they can learn from each other and their instructors. Thus, it is critical that MOOC has the necessary features that can promote the interaction and instructors should design their lesson activities to encourage interaction between student-student and student-instructor.

Lastly, the present study further identified that instructor is one of the critical factors have an impact on both course completion and success in the MOOC context. Therefore, instructors should have fluent teaching and positive attitudes since the participants are heavily influenced by the instructor's professional knowledge and teaching style. Accordingly, the instructors should take continuous training not only about their major field to update their knowledge but also online teaching pedagogies to support learning in MOOCs.

As a consequence, informing educational planners, organizations, policymakers, faculty members about these factors can help design high-quality courses that can enhance participation; thus allowing successful and sustainable implementation of MOOCs.

Further Research

Despite the findings of the study, further researches are needed to acquire deeper understandings about the factors affecting success and course completion in MOOC. Firstly, survey research can be done based on the emerging factors in the present study. Secondly, further studies can explore the factors that may arise from cultural differences, global and local participants in terms of success and completion in the MOOC. Lastly, further studies can also examine the factors that affect success and completion from different stakeholders' (MOOC administrators, instructors) point of view.

Limitations

Although the current study provided useful findings related to the factors that affect success and completion in MOOC, it has limitations. Firstly, the current study is limited by the participants of the AtademiX platform which is one of Turkey's first MOOC initiatives. Secondly, only qualitative data were collected in the scope of the study to answer the research questions; hence, quantitative data can also help extend the findings. Thirdly, this study only focused on the participants' point of view, it is also important to take the course instructors' thoughts to gain deeper understandings about the factors. Lastly, the present study only explored the success and completion factors for those who obtained a certificate or completed course activities. Hence, the success and completion factors for participants falling outside of this scope should also be investigated to provide a better understanding of the success and course completion factors in MOOC.

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