Preferences and Willingness for Participating MOOCS in Turkish

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ABSTRACT
The goal of this study is to explore preferences of the experts, students, faculty, and administrators in the field of academic computing regarding the Massive Open Online Courses (MOOCs). This descriptive study was conducted during the Academic Informatics 2015 Conference help during 31 January – 6 February 2015, Anadolu University, Eskisehir, Turkey. An online questionnaire was used to gather data. The results have revealed that there is a strong will among the participants of the study to take MOOCs on computing (programming, software engineering, etc.), open and distance learning tools and applications, as well as some topics in social sciences, personal development and hobbies. It was also noticed that male participants in the range of ages 17-24 show more interest in taking MOOCs among all the groups.

INTRODUCTION
It is non-contestable that there is an effect of the changes and developments in technology on every aspect of our daily lives. Education is one of these aspects or field influenced by the continual innovations and developments in technology. The emerging technologies enable equal access to standardize and quality education to all who wish for. The Massive Open Online Courses (MOOCs) can be considered as one of the artifacts of this trend.

MOOCs are defined as online courses that ensure large-scale interactive participation and aim for open access through the Web, where individuals may enroll and follow up the content. Instruction is delivered via videos, texts, quizzes, discussion forums, blogs and so forth. Initial idea behind MOOCs was, by using the potential of technology, to establish a network of people who share the same interest on a topic to learn and share their experiences. The first MOOC, the Connectivism and Connective Knowledge (CCK08), offered by George Siemens and Stephen Downes in 2008. Siemens and Downes followed a connectivist learning approach where learners were encouraged to control their own learning process, to engage with dialogue and exchange of ideas with others on the network, and to follow an informal learning path based-on their preferences through any social media they choose (Hermann, 2012). The success of connectivist MOOCs led to Stanford AI-based MOOCs. Sebastian Thrun and Peter Norvig used MOOC concept to teach Artificial Intelligence in 2011. They used a system developed by Amazon through algorithms to assess and evaluate enrolled students (Stevens, 2013). In 2012, Udacity, Coursera and MIT edX were founded to provide MOOCs (Martin, 2012). However, the MOOCs offered by or via these for-profit or semi-commercial institutions followed classical instructional strategies such as short-lectures, assignments, discussions and exams (quizzes, etc.). In order to differentiate, those MOOCs promoted connectivist approach is entitled as cMOOCs (c as c in connectivist) and others as xMOOCs (x as a acronym for extended).

The term MOOCs first used by Dave Cormier and Bryan Alexander (Hermann, 2012). It is an acronym for "Massive Open Online Course". In this definition, "M" refers to the word massive. Even though it is primarily used for the number of participants, Levy (2011) states that massive also covers participants' diversity, the kinds of backgrounds and experiences, the communication tools, the web technologies, the amount of distributed knowledge and the complexity of the distribution, the overwhelming width and depth of discourse among the participants, the multi-modal nature of the discourse, and finally the massive amount of time needed to manage and organize. The second letter "O" refers to the word open. Openness means to be free to join, create, interact, analyze, and reflect according to participants' own learning needs (Koutropoulos et al, 2012). Openness embraces all levels of engagement, with no barriers between in and out (Downes, 2008). Openness and flexibility help to maintain the free flow of information through the networks, and encourages a culture of sharing and a focus on knowledge creation (Mackness, Mak & Williams, 2010). On the other hand, "O" refers to the word online, which means the course environment where the important key terms are the Internet, Web and networks for a MOOC. The final letter "C" refers to the word Course, which means implementing an educational plan with a pedagogical approach in MOOCs.

Hollands and Tirthali (2014) have expressed that MOOCs will serve many purposes. They might be considered as a significant step for democratization of education due to ability to reach more individuals with quality learning materials. So, they support social inclusion and provide an opportunity for participants to experience being part of a global community of peers. Also, carefully designed MOOCs might have a reflection on increasing the quality of both face-to-face and online courses. Similarly, Barber, Donnelly, and Rizvi (2013)

used the term avalanche for MOOCs as a metaphor that will transform higher education. According to these and some other experts MOOCs are sort of a premise of a larger modernization of higher education worldwide that is closely related to unbundling and economic sustainability of higher education. Daniel (2012) additionally, indicated that MOOCs are the new openness movement and it has potential to widen access to life-long learning not only in the underdeveloped or developing countries but also in the developed regions of the world.

However, there are opposing arguments against the MOOCs movement. Experts, such as Barlow (2014), Krause and Lowe (2014), and Peters (2013), argue that MOOCs movement is nothing else but a marketing tool for universities, another neo-colonialist instrument, an expression of Silicon valley neo-liberal values, a kind of entertainment media, a new business model for reducing public funding for universities, and the creation of a global higher education digital marketplace. Furthermore, high dropout rate and characteristics of the participants are two other points highlighted in a number of critics. It is now a fact that only a small portion of learners (average 10 percent) completes MOOCs (Breslow, Pritchard, DeBoer, Stump, Ho, & Seaton, 2013; Yuan & Powell, 2013) and many acts as lurkers (Bozkurt & Aydin, 2015; Christensen, Steinmetz, Alcorn, Bennett, Woods, & Emanuel, 2013). It sees that Nielsen's '90-9-1 rule' can be applied to the situation in MOOCs. According to Nielsen (2006), in any initiative 90 percent of the users are lurkers: they read or observe but do not contribute; 9 percent contribute from time to time but other priorities dominate their time; and, 1 percent of users take active part and account for most contributions. The participants' characteristics also do not reflect the MOOCs advocates' claims regarding democratization of education, equal learning opportunity, etc. Studies have shown that the participants tend to be young, well educated, and employed, with a majority from developed countries. There are significantly more males than females taking MOOCs, especially in developing countries. Students' main reasons for taking a MOOC are advancing in their current job and satisfying curiosity (Gaebel, 2013; Wang & Baker, 2015).

In terms of Turkey, MOOCs offerings as well as are still in infancy stage even though there is quite a number of participants to MOOCs in the Coursera, edX, and others. The first attempt to offer MOOCs was made in 2013 by Anadolu University a dual mode public higher education institution that has been providing distance higher education to millions through out the country, Europe, west Asia, Middle East, and Balkans. However, due to low enrolment and lack of support these courses could not launched. Later, in 2014, Koc University initiated a project to translate some of Coursera courses into Turkish, and later in the same year, they designed and offered a course in Turkish in Coursera. At the end of 2014, Erzurum Ataturk University and Anadolu University announced their MOOC platforms and offerings. AtademiX is the name to the Ataturk University's MOOCs platform developed on the Moodle infrastructure. Currently there are 15 courses in this platform (atademix.atauni.edu.tr). A few months before the launch of AtademiX, Anadolu University has introduced its AKEDEMA platform and courses. AKEDEMA is a custom developed platform based-on SharePoint infrastructure. Rational behind design and development of a custom platform was the create a platform that suits the Turkish students' cultural and learning characteristics. Currently 58 courses offered in this platform with no fees. The university stated the goal of the project as to meet the lifelong learning needs of individuals of all ages and education levels. The course subject areas vary from computing skills and business management to communication and childcare. Along with these two projects, there is couple more initiatives declared as MOOCs projects, such as Turkcell Academy's self-paced courses (in collaboration with MIT and Khan Academy), the OpenCourseWare Project of the TUBITAK's (Turkish Academy of Sciences, and the Scientific and Technological Research Council of Turkey) 5000 grants (Aydin, 2015). However, these projects cannot be classified as MOOCs rather open education resources (OER). Moreover, there is no research study on Turkish MOOC participants. Specifically, no scientific data is available concerning the Turkish people's willingness to take a part in MOOCs and their preferences of courses, course materials.

As one easily can interpret that MOOCs are still new to Turkey but the current initiatives are quite promising. In order to provide better flexible learning opportunities there is a need for research studies. Liyanagunawardena, Adams and Williams (2013) conducted a review of available MOOC literature between 2008 and 2012 and found out that most articles published so far have dealt with empirical evidence from case studies, MOOCs' influence on higher education structure, or educational theory relating to MOOCs. The researchers in this study noted that there is a lack and a severe need for studies on MOOCs participants' preferences and attitudes in different contexts in order to design better learning processes in MOOCs.

PURPOSE AND RESEARCH QUESTIONS

This study addresses the above problem, exploring the Turkish people's preferences and willingness regarding MOOCs. More precisely the study intended to explore willingness of the experts, students, faculty, and administrators in the field of academic computing to attend MOOCs and their preferences. The answers of the following research questions were sought in the study:

1. To what extent, do the participants have MOOC experience?
2. To what extent, are the participants of the study willing to participate MOOCs offered in Turkish?
3. What topics do the participants prefer to take in Turkish MOOCs?

METHODOLOGY

A descriptive method was employed in this study. The study was conducted during an academic conference, organized annually by the Turkish Association for Internet Technologies (INETD). INETD is a civic organization (NGO) intended to facilitate advancement of Internet in every aspects of Turkish society, to create a platform where interest groups can come together and discuss the issues, trends, and problems concerning the Internet in Turkey (INETD, 2015). One of the activities of this organization is the Informatics in Academia Annual Conference. The main goal of the Informatics in Academia Conference is to bring all the students, faculty, experts, staff, and administrators interested in information and communication technologies (ICT) in the Turkish higher education institutions together and discuss various aspects of informatics in academia, including technology integration into education, use of ICT in business management procedures, latest developments in computing sciences, digital art, and so forth. The Conference is considered as the largest event in Turkey that brings different interest groups from different subject areas together around the Internet or advance technologies. Similarly, the pre-conference workshops, mainly related to the Internet technologies, such as programming, big data analysis, openness, app development, etc. attract the largest participants in the country.

In 2015, INETD collaborated with Anadolu University to organize the conference. So, it was detained in Anadolu University, Eskisehir on 3-6 February 2015 and pre-conference workshops were also accommodated in Eskisehir on 31 January – 2 February 2015. Total, 100 trainers offered 4 days long workshops in 36 concurrent sessions to 1475 learners with varying backgrounds (students, staff, faculty, administrators, etc.). Originally, more than 3800 individuals applied to participate the workshops but only 1600 were accepted due to shortage of accommodation and seats in sessions. All these workshops, as a custom of INETD, were free to participants and the funding was provided via sponsors. After the pre-conference workshops, another 3800 registered individuals attended the three days long conference. Total 300 papers presented in 12 concurrent sessions, 22 panels, 10 workshops and 10 sponsor sessions were conducted during the conference.

An online survey, consisting of five questions along with age and gender related ones, was used to collect data. Of these questions four were open-ended and they were related to the participants' willingness to take MOOCs in Turkish, and in a Turkish platform as well as their preference of the topics in MOOCs. A close-ended question concerning the MOOCs experience of the participants was also included into the survey.

Table 1: Demographics of the participants

		N	%
Gender	Male	130	61.6
	Female	81	38.4
Age	17-24	95	45.02
	25-32	55	26,06
	33-40	47	22.27
	41-49	6	2.84
	50 +	8	3.79
TOTAL		211	

The online survey opened at the first day of the workshops and kept open until the last day of the conference. During these seven days, it was announced not only in the Conference Program booklet but also via print posters, Twitter and Facebook. Total 273 participants of the Conference and workshops responded the online questionnaire but only 211 answered all the questions. Thus, only these 211 were included into the analysis. Table 1 provides information about the demographics of the participants. As can be observed, approximately 62% of the participants are male and 38% are female. When we look at the age ranges of the participants, it is observed that more than 70% are 32 years of age or less. And, around 45% of this group is in the 17-24 years

range. This is followed by participants of 25-32 years ıf age by 26%. It is observed that the participants of forty years of age and above are at a total ratio of 7%.

During the analysis of the open-ended questions, the responses of the participants have been divided into meaningful sections and coded. Later these coded data have been assembled, classified and then themes have been determined. Another specialist has repeated the same procedure, and later, the generated codes and themes have been compared and the inter rater reliability of the data was calculated. In line with the obtained themes, the responses of the participants have been gathered under four headings. Meanwhile all the qualitative data was transformed to quantitative data. Finally, the findings have been discussed and interpreted within the scope of the relevant literature.

FINDINGS AND DISCUSSIONS

The reporting of the findings is organized according to the research questions. Below are the findings reached during this project. As can be observed in the Table 2, although more than half (57%) of the participants do not have any prior MOOC experiences at all, the ratio of those who have had an experience is not bad (43%). Since the participants were either students in higher education or academicians and administrators, it was expected to have a higher ratio in MOOC experience but this result should be interpreted as that MOOC movement is still in infancy stage in Turkey. Also, lack of MOOCs in Turkish and English language ability of the Turkish participants could be another factor affecting low attendance. The majority of the participants who have a MOOC experience are between 17-32 years old. This result supported the available literature where it was clearly indicated that mostly individuals younger than 30 years old attend MOOCs. On the other hand, gender distribution of those who have an experience uncovered a contradiction with the literature. Interestingly as many females as males had prior MOOC experiences. Christensen et al (2013), for example, reported significantly higher male participants then females in Coursera courses. This result can be interpreted as a consequence of the contexts of the study. Since a big majority of the participants was students in higher education. Also it is interesting to notice that percent of females who has not attended a MOOC twice the more then males.

Table 2. Participants' experiences in MOOCs and willingness to take MOOCs in Turkish

		%	Gender	%	Ages	%
Already attended a MOOC	Yes	43.2	Female	48.1	17-24	27.7
			Male	51.9	25-32	35.2
					33-40	31.5
					41-49	3.7
					50 +	1.9
	No	56.8	Female	69	17-24	57.8
			Male	31	25-32	16.9
					33-40	12.7
					41-49	5.6
					50 +	7
Completion of a MOOC	Enrolled but could not complete any	54.4	Female	35.3	17-24	45.5
			Male	64.7	25-32	28.8
					33-40	18.2
					41-49	4.5
					50 +	3
	Enrolled one and completed	14.4	Female	50	17-24	10
			Male	50	25-32	5
					33-40	3
					41-49	
					50 +	
	Enrolled more than one courses but completed only one	14.4	Female	50	17-24	55.5
			Male	50	25-32	27.8
					33-40	16.7
					41-49	
					50 +	

	Enrolled more than one courses and completed more than one	24.8	Female Male	41.9 58.1	17-24 25-32 33-40 41-49 50 +	42 16.1 32.2 3.2 6.5
Willingness to take A Turkish MOOC	Definitely yes	53.6	Female Male	41.8 58.2	17-24 25-32 33-40 41-49 50 +	43.3 25.4 23.9 3 4.4
	Depends on the topic	44.8	Female Male	33.9 66.1	17-24 25-32 33-40 41-49 50 +	43.6 25.5 18.2 1.8 10.9
	Definitely no	1.6	Female Male	50 50	17-24 25-32 33-40 41-49 50 +	50 50

In terms of completion, the ratio of participants saying “I have enrolled in the course(s) but completed none” was 54.4%, those saying “I have enrolled in one course and completed it” was 14.4%, the ratio of those responding as “I have enrolled in more than one course but have completed only one course” was 6.4%, and finally the ratio of participants saying “I have enrolled in more than one course and completed more than one course” was 24.8%. This result can also be considered as an interesting one due to fact that one of the biggest issues discussed about MOOCs is low completion and high drop-our ratios. Gütl et.al. (2014), Christensen et.al., (2013), Ho et.al. (2014) reported the ratio of those completing the courses they enroll in at the MOOC platform as between 5 and 10 percent. It was observed that the percent of the participants who enrolled and completed one or more MOOCs is higher than the reported percentages in the literature although it is still lower than expected. One may infer this result as that more Turkish participant persist to complete MOOCs then the average. However, it is important to investigate the dropouts among the Turkish participants of MOOCs.

The completion ratio and the reasons behind dropouts have been an interest to several studies such as Balsh (2013), Gütl (2014), and Khalil (2014). These studies suggested that the main dropout reasons are lack of motivation, sense of isolation, shortage of communication and interaction, and participants’ perceptions regarding their shortage of skills about online learning and especially about technical matters. Gült et.al. (2014) have classified the dropout reasons into four main categories: (1) personal, (2) academic, (3) support, and (4) learning environment related. As personal reasons, the research participants have expressed the change in working conditions at their workplaces, and the fact that their expectations have not been met in MOOCs. They also listed family and health problems among personal reasons for not being able to complete the MOOCs they enrolled. Meanwhile, Gült et al (2014) classified the difficulty to work and study simultaneously, and difficulty of motivating themselves as the academic reasons for the dropout. With respect to the support services, the MOOC participants have, first of all, emphasized that they usually do not receive adequate support from course instructors/facilitators, their families, and employers. In addition, they expressed the lack of adequate and timely feedback as the reasons categorized as support. The last reason indicated in this category was shortage of technical skills to be able to actively complete the courses. On the other hand, as environmental factors, the MOOC participants have mentioned problems in access to the Internet, inability to establish communication with the other learners and the instructor(s)/facilitators, and lack of a personalized learning environment to meet their personal needs and learning processes.

The final research question of the study was about the participants’ preference of the topics they would like to study in Turkish MOOCs. As it was indicated in the methodology section, the participants were asked to answer

an open-ended question freely, and the responses analyzed qualitatively but later transformed into quantitative data. As a result, four categories have been identified. Table 3 provides these categories.

Table 3. Participants' preferences of the topics for MOOCs

Categories Course Topics	**%**	**Gender**	**%**	**Age**	**%**
Technical trainings	52	Female	36.7	17-24	50
		Male	63.3	25-32	25.5
				33-40	20.1
				41-49	2.2
				50 +	2.2
Open and distance learning	18	Female	51.7	17-24	53.5
		Male	48.3	25-32	16.3
				33-40	18.6
				41-49	4.6
				50 +	7
Social sciences	13	Female	52.2	17-24	41.9
		Male	47.8	25-32	22.6
				33-40	29
				41-49	
				50 +	6.5
Personal development and hobbies	17	Female	58.6	17-24	24
		Male	41.4	25-32	28
				33-40	32
				41-49	4
				50 +	12

As it is summarized in the Table 3, a big majority (52 percent) of the participants of the study prefers MOOCs on "Technical Training". Especially, young males (between 17-24 years old) are very eager to improve their technical skills. Under this category, the participants mostly indicated courses on computer programming, such as Ruby Rails, Java, C-sharp, etc., mobile operating and programming systems, such as Android, IOS, etc., and some basic computer operating and advance application software, such as advance Excel, MySQL, etc. This is also contradicting result with the literature. Studies, such as Christensen et.al. (2013), indicates that the MOOCs preferred are generally in the field of social and human sciences. However, this can be considered as usual due to the fact that a big majority of the participants of the study was from the fields related to informatics for academia.

The surprising result was the second category. A significant number of participants stated topics related to "Open and Distance Learning", such as theories of open and distance learning, mobile learning applications, designing online learning, etc. It was even more surprising that similar to technical training category those who noted the topics in this category were mostly in the youngest group. This might be interpreted that young generations value open and distance learning more, and try to learn how it happens. On the other hand, 13 percent of the participants have expressed interest in taking MOOCs related to "Social Sciences". For instance, foreign languages, history, art, psychology, philosophy, sociology, anthropology, and literature are the most frequently written topics. The topics in the final category, "Personal Development and Hobbies", were pointed out as much as the ones in open and distance learning category. The course topics vary a lot from garnishing to gardening, photography to childcare, personal care to gastronomy, home improvements to public speaking.

Moreover, Table 3 uncovers that there is a significant difference between females and males' preferences of the topics for MOOCs. Males are interested more in technical fields while the females are mostly in personal development and hobbies as well as topics in other categories. It can also be seen in Table 3 that younger participants mostly want technical training, open and distance learning, and social sciences while older ones prefer personal development and hobbies.

CONCLUSION AND RECOMMENDATIONS

The open and distance learning represent an approach that has emerged in order to find a solution to the diversified requirements of individuals in the social changes. New applications are added to the agenda with the support of developing technologies in order to be able to meet the increasing and changing requirements. MOOCs, attracts an increasing attention, are one of the innovations emerged in order to meet these requirements.

MOOCs are defined as online courses that ensure large-scale interactive participation and aim for open access through the Web, where individuals may enroll and follow up the content. The participants may enroll in these courses as based on their field of interest or requirements, create contents with the course/s they prefer and share these with other individuals, without any place and time limitations. While MOOCs offer opportunity to work and discuss with individuals from different regions of the world, in different age groups and cultures, they also are able to create life-long learning opportunities for students, adults, business people, and in general anyone who would like to improve her/his skills (Stracke, 2014). Therefore, MOOCs, bringing learners of different learning experiences and lives together in the same environment, allow them to assist in the personal developments of each other by discussing and sharing their opinions, experiences and knowledge and adding different perspectives. Meanwhile, this massive and open nature of the MOOCs support the enrichment of course contents (de Waard, 2013).

Although everyday millions of the individuals attend MOOCs, there are a lot of missing parts in the literature. For instance, experts agreed on that we have to study more who are these people taking MOOCs, what they prefer to study, why they come, why just a few complete and others not. In Turkey, on the other hand, the MOOCs movement is still in infancy stage and there are very few MOOCs in Turkish. Aydin (2015) claims that in order to offer more effective, efficient, engaging and enduring initiatives for opening up education, there is a need for analyzing the audience. This study was conducted to meet this need. In other words, the primary goal of this study is to explore the learners' willingness to participate MOOCs and their preferences of the topics for MOOCs. At the same time, the study provided a limited insight about the current status of Turkish higher education students, administrators, staff, and faculty regarding MOOCs' participation and completion.

This descriptive study was conducted with voluntarily participation of 211 students, staff, faculty and administrators who have joined the Informatics for Academia 2015 Conference organized by INETD and Anadolu University during 31 January – 6 February 2015 in Eskisehir. An online survey instrument, included both open- and close-ended questions, was shared with around 4000 conference and preconference workshops participants. However, only those 211 participants answered all the questions included in the survey and these used in the analysis.

Some of the results of the study supported the available literature while some uncovered contradicting points. First of all, the study has shown that quite a number of the participants have had MOOC experience. This was quite interesting because, as it has been mentioned before, the number of MOOCs in Turkish is very limited. It seems those young Turkish students, staff, and faculty often attend MOOCs in Coursera, EdX and other platforms. On the other hand, similar to the literature, those participants who had prior MOOC experience are mainly males, less than 30 years old, and already enrolled in a higher education institution. Since MOOCs require use of technology effectively, having younger generations in MOOCs is not surprising. Although age range of the participants does not really contradict, still MOOC participants in Turkey are still a bit younger than general audiences indicated in the literature, such as URL-3 (2014). Similarly, the completion ratio is a bit higher among those participants of the study who enrolled a MOOC. The literature reveals that the completion ratio is between 5 to 10 percent (Coutere, 2014; Christensen et. al., 2013; Glance, 2013; Gütl et. al., 2014; Ho et. al., 2014) in MOOCs but in this study it was found between 10 to 24 percent. This can be interpreted that the Turkish MOOC participants show more resistance to complete the online courses.

In terms of willingness to attend MOOCs in Turkish, a big majority showed great interest in these MOOCs. Also a great deal of the others indicated that the topics of MOOCs are an important factor for their decision. Only very few noted an unwillingness to take MOOCs in Turkish. In terms of participants' preferences of the MOOC topics, males preferred technical topics while females indicated MOOCs related to personal development and hobbies. According to the literature (e.g. Jacobs, 2013; Kirschner, 2012; Martin, 2012; Young, 2013), the number of the individuals who take to MOOCs for either entertainment or curiosity is higher than those who attend for improving their job related skills or who are looking for a new occupation. However, in Turkey, especially younger generations prefer courses that will help them get a certificate and finally a job. Having a decent and secure job is the major goal orientation of the students in undergraduate level. That might be an important factor why especially males prefer technology related MOOCs.

In order to be able to benefit from MOOCs, there is a need for further research in the field. Pedagogical models, business models, cultural differences, international multilingual MOOCs platforms, effective ways of using of open education resources in MOOCs, quality assurance, MOOC participants preferences on different aspects of MOOCs, including media choices, instructional and assessment strategies, as well as their behaviors in MOOCs are among the major research areas must be searched.

On the other hand, the findings have shown that individuals are willing to take MOOCs, especially if they are focusing on topics that they are interested in. So, the institutions should think of building new MOOCs platforms in Turkish or the available ones should consider transforming their platform in to a multilingual platform. It seems that MOOCs focusing on technological skills, personal development and hobbies will grabs the attention of the Turkish individuals.

LIMITATIONS OF THE STUDY

Although it provides an insight about the MOOCs participants in Turkey, the study had some limitations. First of all, the study is limited to the participants of an academic conference that focuses on information and communication technologies in academia. Conducting the study with a group whose majority is young and tech-savvy might influence the results related to technology-based learning, MOOCs. More research in different contexts and with various participants might help to get a better insight. Additionally, the number of responses might have an affect on the results. A more appropriate number of responses, such as more than 360 as indicated by Creswell (2012) also increase the reliability of the results.

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