


## Current Status of the MOOC Movement in the World and Reaction of the Turkish Higher Education Institutions

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### Abstract

This manuscript intends to elaborate the current status of MOOC movement in the world and to reveal the results of a survey study in which the Turkish higher education institutions' reactions to this movement was investigated. The survey was actually a part of a larger survey study that, as a deliverable of the EU funded HOME project, was conducted to contribute to the literature by providing an insight about European perspectives on MOOCs, to gain a better understanding of the strategic reasons why a higher education institution is or isn't involved in MOOCs, and to compare these reasons with the results of similar studies in U.S. After a brief background and history of MOOC movement, following sections of the manuscript present the details (methodology and results) of the survey study on the Turkish HE institutions' strategies regarding adaptation of MOOCs. The final part of the manuscript consists of discussions and conclusions drawn in the light of the results of the study.

**Keywords:** MOOC; adaptation; Turkey; Higher Education; institutional strategy; online education

### Introduction

Since the first offering in 2008 by George Siemens and Stephen Downes, the massive open online courses, or MOOCs, has been at the focal point of all the stakeholders of higher education institutions. MOOCs are courses designed for large numbers of participants, that can be accessed by anyone anywhere as long as they have an internet connection, are open to everyone without entry qualifications, and offer a full/complete course experience online for free (OpenupEd, 2014).

Dave Cormier and Bryan Alexander are the first ones proposed the term MOOCs (Herman, 2012). However, it is widely accepted that MOOC movement has started in 2008 by a course called *Connectivism and Connective Knowledge* (CCK08), which was facilitated by George Siemens and Stephen Downes (Siemens, 2013). The success of connectivist MOOCs does not only fostered the development of extended MOOCs, or xMOOCs but also encouraged many for-profit or non-profit organizations as well as countries to offer MOOCs (Daniel, 2012). Udacity, Udemy, EdX, FutureLearn, J-MOOCs, OpenupEd are among these initiatives.

According to a report prepared by Stanford Class Central, it was estimated that more than 500 Universities offer 4200 courses to 35 million learners globally (Shah, 2016). Coursera, a for-profit provider, offers more courses than many others (Shah, 2016) and there is a US domination (Straumsheim, 2017). In other words, around 60% of courses are being offered by US-based providers (Shah, 2016). However, European based MOOC initiatives are progressing fast. For instance, FutureLearn of UK, which has actually started as a respond to US-based providers, encouraged by the UK government and is led by Open University of UK, reached more than 3 million learners after its launch in late 2013 (Walton, 2016). France Université Numérique (FUN), Miriadax, ECO and EMMA are among the other larger MOOCs initiatives in Europe. OpenupEd is actually an initiative to promote Europe-based MOOC initiatives. It does not offer a single MOOC platform but rather let every partner use their own platforms. It also promotes diversity, multilingualism,

equality and quality. It provides quality guidelines and labels as well as marketing opportunity to its partner MOOC providers (OpenupEd, 2016).

In Asia, the governments are playing an active role in MOOC initiatives. For instance, K-MOOCs in South Korea, Thai MOOCs, Malaysian MOOCs, Chinese MOOCs, and Philippines are among the national initiatives promoted by the governments. Kim (2015) lists the major incentives behind the governments' interests in MOOCs as to provide higher education opportunity to more people (China), or to reform their existing systems of higher education and lifelong learning (Korea and Malaysia). On the other hand, Japanese MOOC provider J-MOOCs is a joint-initiative and similar to FutureLearn. In other words, a consortium composed of universities, corporations, governmental institutes, and academic societies promoted by the Japanese government was established to offer MOOCs.

In sum, all around the world there is a growing interest in demand MOOCs and supply for MOOCs despite several unanswered questions, such as sustainability and low completion rates.

## MOOCs in Turkey

In Turkey, the MOOC movement is still in infancy stage. Especially the supply part is quite weak. There are only a few universities and a couple for-profit initiatives that provide MOOCs. Anadolu University and Erzurum Ataturk University have already a history in open and distance learning and based on their experiences they are the major MOOC providers in the country. Both launched their MOOC platforms in late 2014 and offered first courses in 2015. Anadolu University, for example, has started with 8 courses mainly in social sciences and humanities and more than 2000 learners in its custom developed MOOC platform called as AKADEMA (<http://akadema.anadolu.edu.tr/>). However, after the first round, Anadolu University decided to change its platform and gave a break until June 2016. Currently, AKADEMA offers 48 courses in Turkish and 1 in English to all who would like to take it via its Blackboard-based platform. Atademix, on the other hand, is the name of the Erzurum Ataturk University's MOOC initiative. The University has already offered 14 courses in Turkish and is currently running another course too. Atademix is a Moodle-based MOOC platform ([atademix.atauni.edu.tr](http://atademix.atauni.edu.tr)). Additionally, Yaşar University, a private HE institution in İzmir, transferred some of its online courses as self-paced MOOCs and offered to all. Currently they are offering 17 courses without any certification ([hayatboyu.yasar.edu.tr](http://hayatboyu.yasar.edu.tr)). Furthermore, Koç University, another private institution in İstanbul, offers 6 courses in Turkish in Coursera, and a GSM company, Turkcell sponsors to offer 3 courses in EdX. Also, a couple entrepreneurs intended to create a Coursera-like environment in Turkey, entitled as UniversitePlus (<https://www.universiteplus.com/>). Currently they offer 46 courses in collaboration with four different universities.

Although there is not any study or reliable reference, it seems that demand for MOOCs is growing faster than the supply side. Especially in the corporate settings, the training departments lead their employees to take Coursera and EdX courses. Also, Khan Academy is offering courses in Turkey in Turkish and not only corporations but also educational institutions and single users show great interest in these courses. Still, there is no reliable and valid data on how many learners are participating in these courses.

Another shortage of data about MOOCs in Turkey is related to awareness, perceptions, adaptation or refraining reasons of the higher education institutions. The same shortage felt by HOME Project partners and a survey study was conducted to contribute to the literature by providing an insight about European perspectives on MOOCs (HOME, 2014), to gain a better understanding of the strategic reasons why a higher education institution is or isn't involved in MOOCs, and to compare these reasons with the results of similar studies in the U.S. (Allen & Seaman, 2014; 2015). The

following sections of the manuscript elaborate this study and results collected from participant Turkish universities.

## Study

The study, entitled as Institutional MOOC strategies in Europe, intended to explore the European higher education institutions awareness, perspectives, adaptation strategies and refraining reasons regarding MOOCs. It was conducted during the fourth quarter of 2015. The survey was largely a repetition of the survey from 2014 (Jansen & Schuwer, 2015). In order to have a base to compare the results of this study with the Babson Group's results (Allen & Seaman 2014, 2015, 2016), quite a number of questions were adapted from the instrument Babson Group used. Most questions were kept identical to the 2014 survey. Some additional questions were developed during the summer of 2014 and tested among HOME partners (mainly related to section 6 and 7). After finalizing the English version, the survey was translated into French and Turkish. A Google form offering those three languages was open from 15th October to 4th January 2016. Higher education institutions were in general approached by personal contact and by the use of newsletter and social media to complete the questionnaire.

## Instrumentation

The survey instrument was developed based-on the HOME Project partners' initial discussions and also some items were taken from a survey that has been implemented some time in U.S. (Allen & Seaman, 2014; 2015; 2016). As a result, the final version of the survey consisted of the following 9 sections:

1. Profile Information (8 open question)
2. Status of MOOC offering, main target group and impact on institution (5 questions with various answer categories, 3 identical questions as used in the US surveys)
3. Do you agree with the following statements? (4 identical questions as used in the US surveys and an optional open question)
4. Primary objective for your institution's MOOCs (1 question with 9 options identical to US survey)
5. Relative importance of the following objectives for your institution's MOOCs (4 closed question on 5 point Likert scale plus an open question)
6. What are the primary reasons for your institution to collaborate with others on MOOCs? (a list with 24 possibilities and 1 open question)
7. What are the primary reasons for your institution to outsource services to other (public and/or private) providers on MOOCs? (a list with 24 possibilities and 1 open question)
8. How important are the following macro drivers for your institutional MOOC offering? (10 closed question on 5 point Likert scale)
9. How important are the following dimensions of a MOOCs? (15 closed question on 5 point Likert scale)

Most closed questions could be scored on a 5-point scale ranging from *Not at all relevant for my institution* to *Highly relevant for my institution*. Exceptions are those closed questions that were included from the US survey (Allen & Seaman, 2014; 2015; 2016). These questions were kept identical with those in their survey, so comparisons could be made.

In order to secure the validity of the instrument, a sort of a simplified version of Delphi technique was used. Namely, the HOME project partners (total 23) were asked to review the items (questions

and alternative choices for the close-ended ones) included in the questionnaire several times in order to finalize it. After receiving approval of all the partners, the questionnaire was translated and localized to the Turkish context by the author. Later the Turkish version was shared with three experts to secure the content validity. The experts individually asked to review the instrument based-on following questions: Is the questionnaire valid? In other words, is the questionnaire measuring what it intended to measure? Does it represent the content? Is it appropriate for the sample/population? Is the questionnaire comprehensive enough to collect all the information needed to address the purpose and goals of the study? Does the instrument look like a questionnaire? One of these experts was an experienced professor of open and distance learning while the other two were professors in English Language. After receiving their recommendations, the questionnaire was finalized and an online version was created.

### **Participants**

In total 168 institutions responded out of 30 countries to the questionnaire. This was corrected to a) include only higher education institutions (HEIs) which are part of the formal Higher Education (HE) structure of the country of origin and b) only one response per institution, i.e. select the one most representative to answer the questions. So, the response in total is 150 HEIs, out of which 23 universities from different regions of Turkey. In Turkey, three universities are legally authorized to offer massive open and distance learning. These three were among the 23 participants. Along with these ODL providers 3 universities from Ankara, the capital city, 3 from Istanbul and 2 from İzmir also responded the survey. All the other participant universities are located in other provinces of the country from very far east to west, north to south. Furthermore, among these 23 institutions only 3 were private and all the others were public institutions.

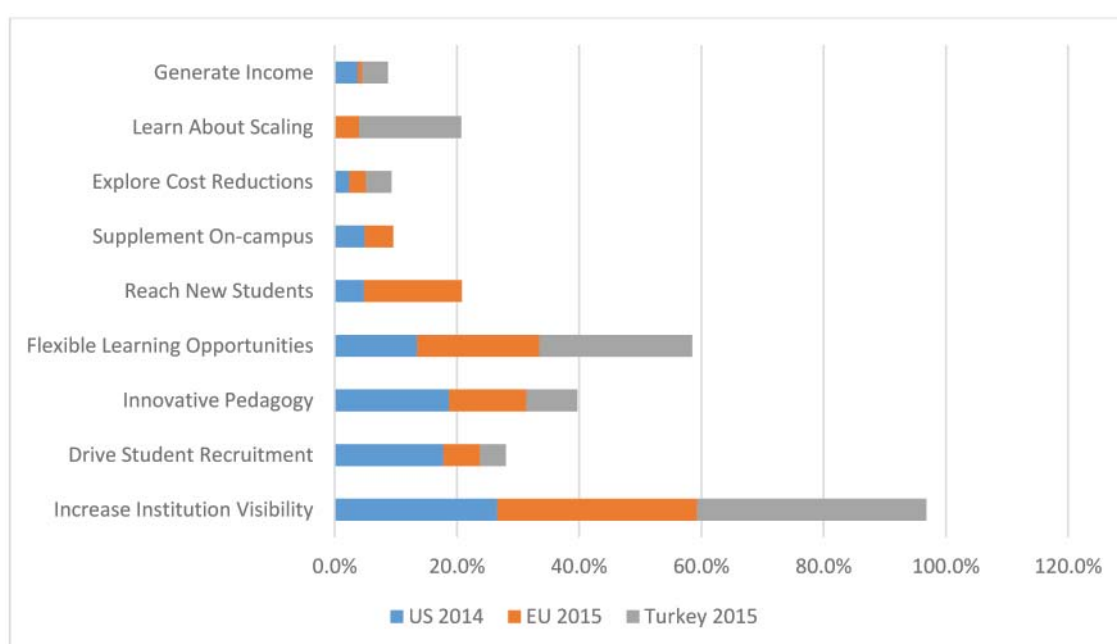
### **Analysis**

In this report, some results are compared with other studies, to similar audience, using exactly the same questions. The abbreviations US2013, US2014 and US2015 refer to the US studies published a year later (Allen & Seaman, 2014; 2015; 2016). EUA2013 refers to the European survey in 2013 published by Gaebel, Kupriyanova, Morais and Colucci (2014); EU2014 (all) to results of Jansen and Schuwer (2015) and Jansen, Schuwer, Teixeira and Aydin (2015); the results of the overall survey are referred to as S2015 (all). And as can be interpreted easily Turkey2015 indicates the results derived from the Turkish participants of the questionnaire. As such the year mentioned in these abbreviations refer to the year the survey was conducted.

### **Results**

One of the questions whose answer were sought in the study was about the institutions' objectives to offer MOOCs. As can be observed in Figure 1, the Turkish universities have almost the same objectives as Europe and quite similar to U.S. institutions. Increasing institutional visibility is the major objective for the Turkish universities the same as for EU and US. Providing flexible learning opportunities also seems a more significant objective for both Turkish and European universities compare to US. Interestingly learning about scaling is also an important objective for Turkish institutions while just a few in EU and none in US. Moreover, for Turkish institutions reaching new student and supplementing on-campus education via MOOCs are not as important as other objectives.

The Higher Education Council (HEC), a government agency that takes all the decisions about higher education in Turkey, has been given importance to internationalization over the last five years and encourages the HE institutions to access and accept more international students. This could be related to the increase institutional visibility objective. Namely, the institutions that have an objective to reach more international students want to increase their visibility in international area and so they may see MOOCs as a tool to increase their visibility. On the other hand, as it has been mentioned before, the majority of the participant institutions has been offering open and distance learning for some time and so they have a faith to provide flexible learning opportunities to all. That might be why, flexible learning opportunities was chosen as a major objective by many Turkish HE institutions. Also, since Turkey has a large young population there is a huge demand for HE and so the institutions do not struggle to find students. Thus, not many Turkish Universities consider driving student recruitment as an objective as opposed to the US institutions.

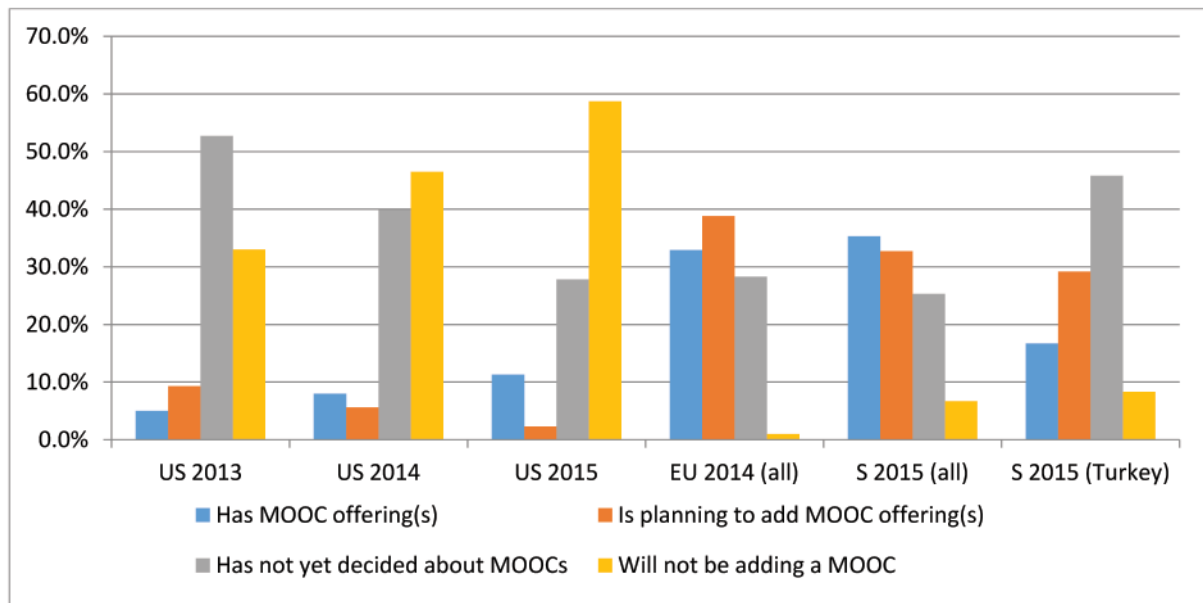


**Figure 1: Primary Objective of Adapting MOOCs**

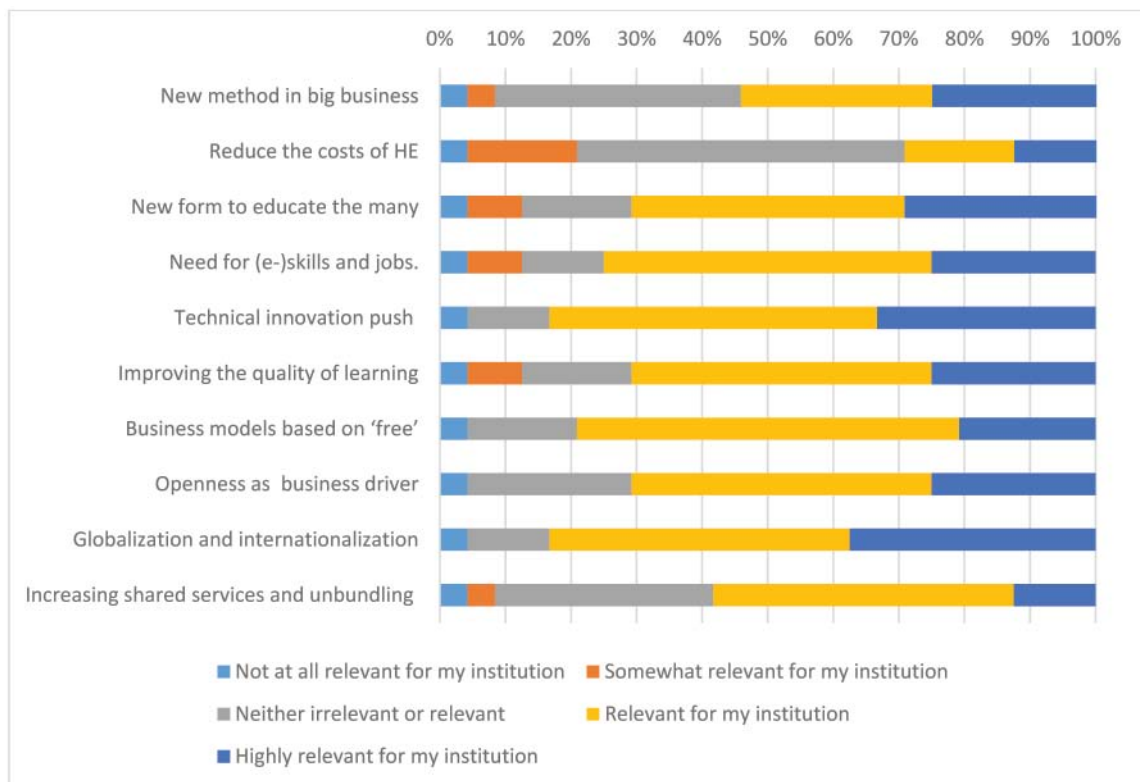
Figure 2 shows that a big majority of the institutions has no plans (45.8%) to offer MOOCs. A few (8.3%) has no intention too. On the other hand, in 2015 it seems 16.7% of the participant institutions offered MOOCs which is a higher ratio then the survey conducted in US. The remaining participants indicated themselves as MOOC providers however investigation of their Web sites uncovers that only one fourth of them are really offering MOOCs and others offer just online courses but not MOOCs. In sum, the study reveals that a big number of Turkish HE institutions (participants) are not really aware of MOOCs.

The survey also sought what kinds of macro-drivers are important for the participant Turkish HE institutions. As can be seen in Figure 3, globalization and internationalization (83.3%), technical innovation push (83.3%), and business models based on 'free' (79.1%) are the important macro-drivers for the Turkish universities for their MOOC offerings or plans. On the other hand, reducing the costs in HE (29.2%) and increasing shared services and unbundling (58.3%) are the least important drivers. Reducing the cost is very understandable for the Turkish universities because





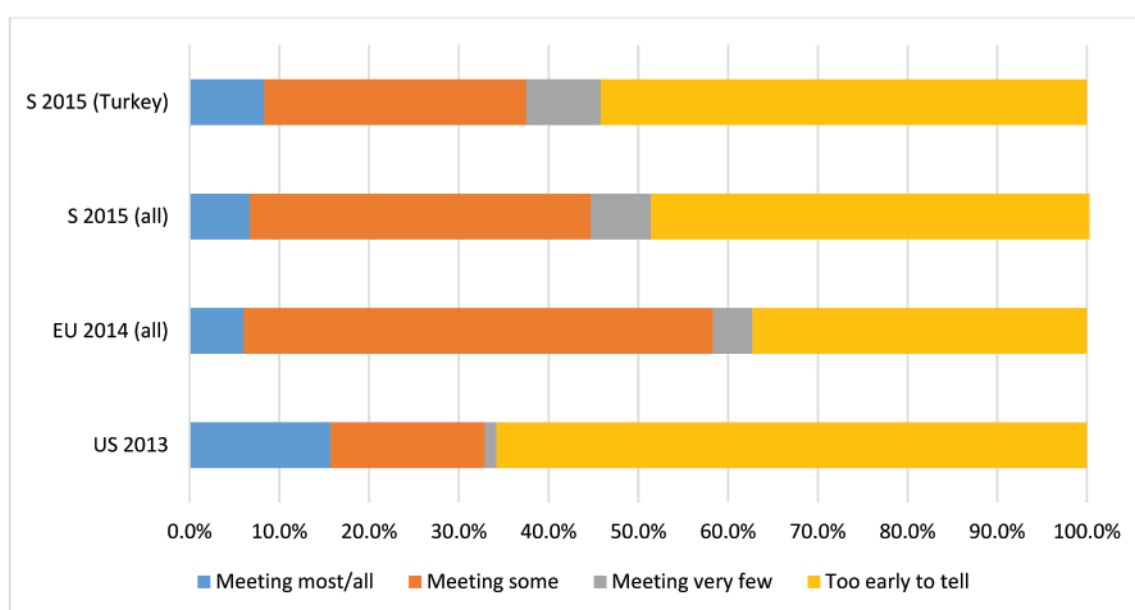
**Figure 2: MOOC offerings**



**Figure 3: Importance of Macro-Drivers for MOOC Offerings or Plans for the Turkish Participants**

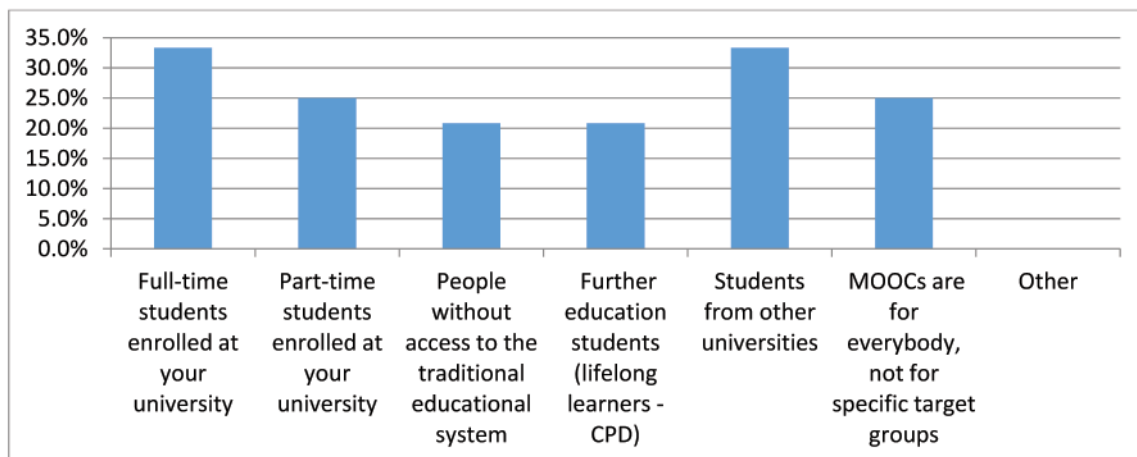
the costs are quite low especially for public universities and even for private ones. The government subsidize almost all the costs for institutions as well as students. The most expensive undergraduate degree costs around 500 Euros per semester for the students. Open and distance learners pay way less. For instance, Anadolu University, the largest ODL provider in Turkey, charges only 75 Euros per semester for all the courses. Result related to unbundling is also understandable. Turkish universities hesitate to collaborate and outsource their major operations due to mainly the legal regulations about their budgets, shortage of sustainable vendors and culture.

In terms of the question regarding the extent MOOCs meet the institutions' objectives (Figure 4), a big majority of the Turkish institutions responded almost the same as US and EU institutions: It is too early to observe. Similarly, some institutions noted that their MOOC offerings meet some of their objectives.

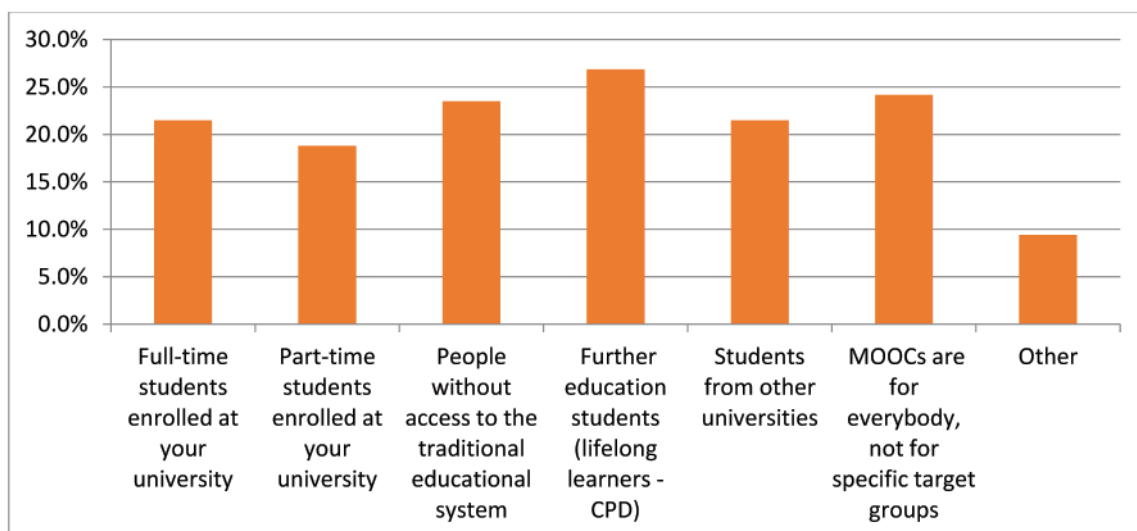


**Figure 4: The Extend MOOCs Meeting the Institutions Objectives**

The Turkish institutions have various perceptions regarding which group should MOOCs be targeting. As can be inferred from Figure 5, although the Turkish HE institutions targets various groups, their main goal is to reach their full-time and part-time students in their own institution and in other universities. Quite a number of them (25%) also believe that MOOCs should be created to serve everybody not a specific target group. This later result is consistent with EU results that a big majority of the participant universities indicated the same concern about target groups for MOOCs. Nonetheless, opposite of the Turkish universities, a big number of EU universities expressed respectively lifelong learners and people without access to traditional educational system as the major target groups for MOOCs (Figure 6). Because majority of the Turkish universities (especially public ones) easily reaches the students they need, they do not feel to reach further education students. Also, a big number of them offers face-to-face training to corporations. Costs of offering free courses is another barrier for institutions to target lifelong learners.



**Figure 5: Target Groups for MOOCs According to Turkish Universities**

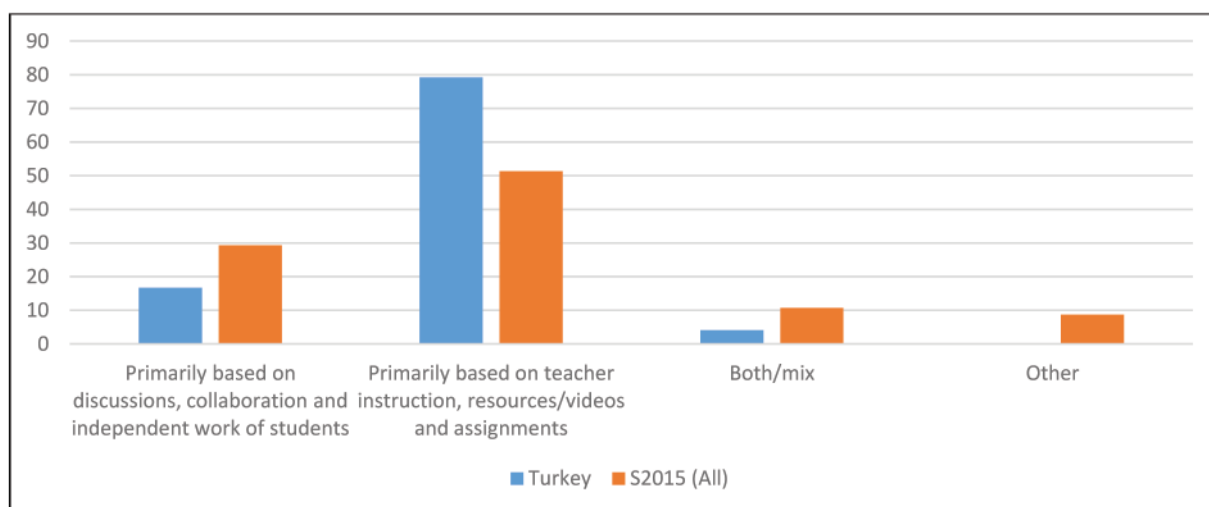


**Figure 6: Target Groups for MOOCs According to EU (Including Turkish) Universities**

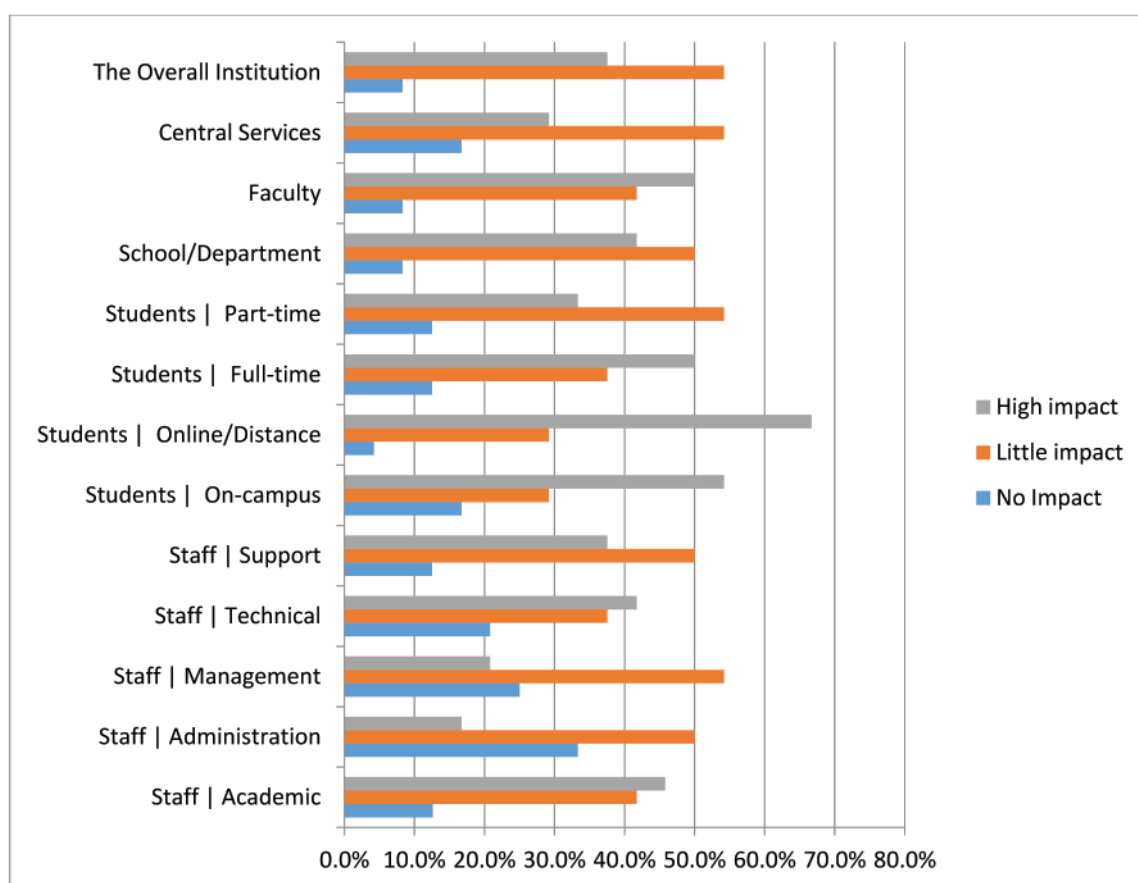
Meanwhile almost 80% of the participant Turkish universities prefers xMOOCs, or more traditional teacher led online learning. Only one institution noted a hybrid MOOCs (hMOOCs) and 4 cMOOCs. These results are a bit different than the overall results. As can be observed in Figure 7, more cMOOCs and hMOOCs as well as some other types have been offered by the European HE institutions. Since there are a few examples of fully cMOOCs and there is a shortage of knowhow on innovative online pedagogies in Turkey, this might be an understandable result.

In the survey, the institutions were also asked to indicate the impact of MOOCs on their major operations and stakeholders. The results have shown that only a few of the universities (8.3%) indicated no impact on overall the institution while a big majority (54.2%) felt a little and quite an interesting percent (37.5%) high impact (Figure 8). The highest impact was felt on full-time online/distance learners as well as on-campus ones. Academic staff was also signposted as another stakeholder that felt the impact quite high. This can be related to online experience. In other words, MOOCs can provide an online learning and teaching experience.



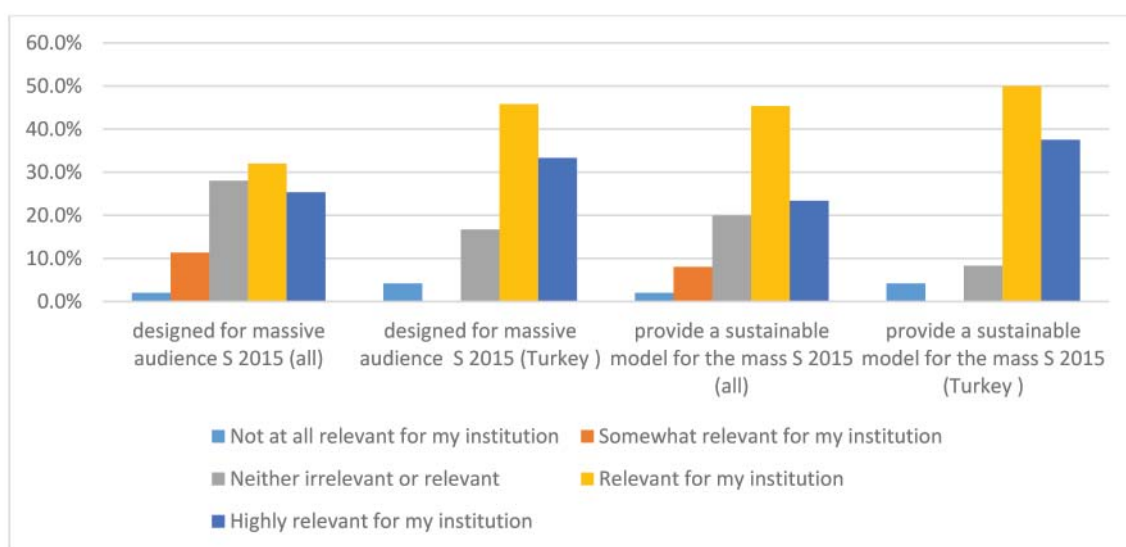


**Figure 7: Type of MOOCs**



**Figure 8: Impact of MOOCs on the Institutions' Operations and Stakeholders**

The study also sought the institutions' perceptions concerning the major dimensions of MOOCs: Massiveness, Openness, being Online, and a complete Course. In terms of massiveness, the survey included two questions: First question asked the degree of importance of designing MOOCs for masses while the second asked the institutional relevance of whether MOOCs should provide a sustainable model for masses (for instance, leverage massive participation or a pedagogical model such that human efforts in all services does not increase significantly as the number of participants increases). As can be observed in Figure 9, for Turkish universities designing for masses was a bit more important than the EU average. In other words, 79.1% of the Turkish participant institutions indicated that designing for masses is relevant (45.8% relevant and 33.3% highly relevant) for their institutions while 57% of EU universities (including Turkish ones too) noted as relevant. Accordingly, more Turkish universities stated that MOOCs should provide a sustainable model for the mass than overall EU universities. One of the rationale behind these results might be again HEC's encouragement of universities to offer online learning to increase their revenues. Thus, a number of Turkish HE institutions (63 out of 198) offers distance education to thousands of learners.



**Figure 9: Responses Regarding Massiveness of MOOCs**

In terms of the openness dimension, two major questions were included in the survey instrument on fees. The participants asked to indicate their perceptions regarding how important for their institution to offer MOOCs for free (i.e. without any costs for participants) and also to offer MOOCs that provide an opportunity for participants to get (for a small fee) a formal credit as a component of an accredited curriculum. Similar to the massiveness component (Figure 10), more Turkish participant universities (66.6%) indicated as relevant and highly relevant than the overall EU universities (58%). Interesting distinction between Turkish and overall EU universities is about offering an opportunity for participants to get (for a small fee) a formal credit as a component of an accredited curriculum. For almost all (95.8%) of the Turkish universities this is a highly relevant (70.8%) and relevant (25%) item while one third of the overall EU universities has doubts about this opportunity.

In terms of other questions concerning openness of MOOCs, more Turkish universities than overall EU responded as relevant and highly relevant (Figure 11). The biggest difference between these two parties is in open licensing the MOOCs so that providers and participants can retain, reuse, remix, rework and/or redistribute materials. While 87.5% of Turkish participants found this

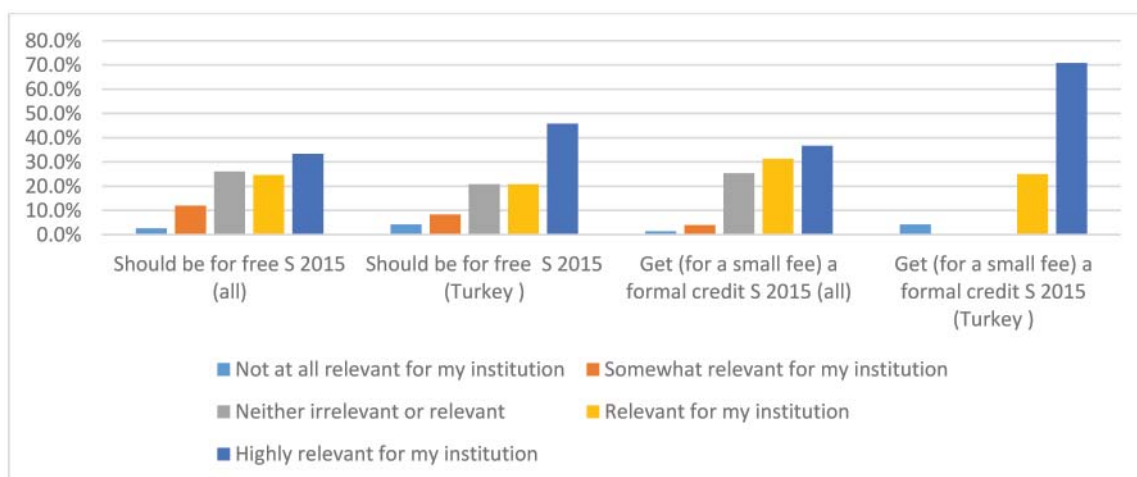


Figure 10: Responses Regarding Participant Fees

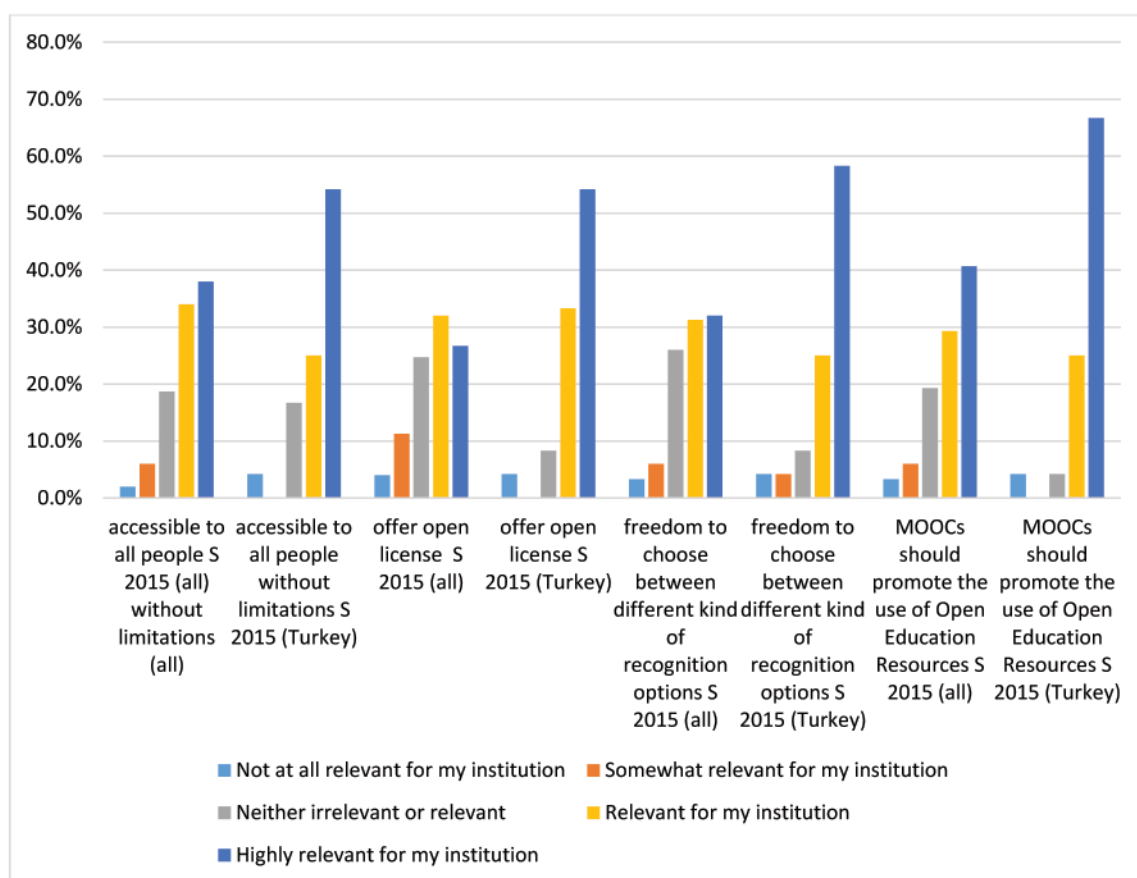


Figure 11: Responses Regarding Openness

item relevant and highly relevant for their institutions, only 58.7% of the overall EU institutions agreed on the relevance. Another interesting finding is about promotion of open education resources (OER) in MOOCs. Almost all (91.7%) Turkish institutions promote this idea of using OER in MOOCs. Additionally, the percentages of Turkish universities and the overall EU concerning the courses' accessibility for all people without limitations are almost identical.

Online in MOOCs refers that all aspects of the course are delivered via online technologies (Jansen & Schuur, 2015). Related to being online, three items were included into the survey and asked the participants to indicate the degree of relevance of these items for their institutions. The items were: 'MOOCs should offer courses completely online'; 'The final exams of a MOOC for formal credit should be offered online as well'; and 'MOOCs should support off-line access for those with weak network connectivity'. Figure 12 reveals that the majority of the Turkish participant universities and overall EU universities agree that MOOCs should be offered completely online although some have doubts. Offering final exams online for a formal credit was also favored by a larger percent of Turkish universities (83.3%) than overall EU universities (56%). Especially regarding this item one third of the overall EU universities has doubts. A similar finding was also observed about offering off-line access to MOOCs. More Turkish than overall EU participants preferred off-line access to the courses. Among these three questions only the second about online exams is interesting due to the fact that HEC forces all the open and distance learning providers to conduct proctored face-to-face exams rather than alternative assessment strategies and tools. Even, in a recent legal document, HEC asked all the institutions to adapt a strategy that is not pedagogically appropriate: for every four wrong answers, one correct answer must be considered incorrect to be able to reduce the guessing. However, the survey indicates that institutions are in favor of online exams. Additionally, the results regarding off-line access can be explained with limited access to the Internet in rural areas and also the cost of access issues.

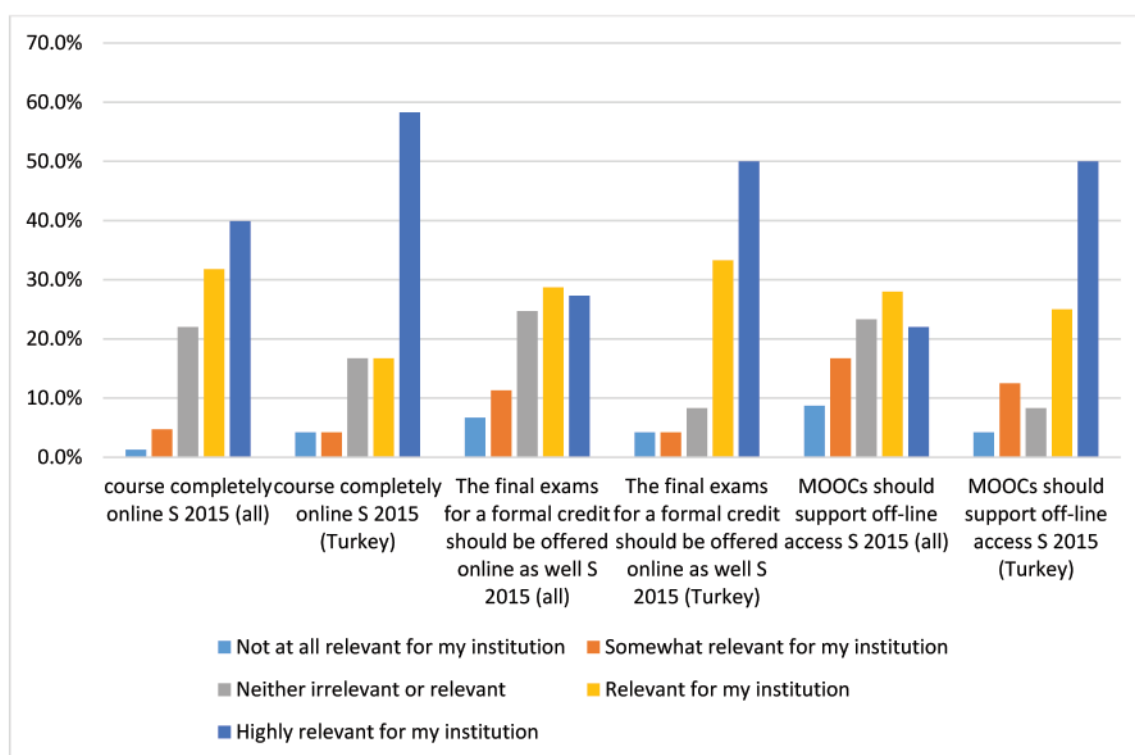


Figure 12: Responses Regarding Online Dimension

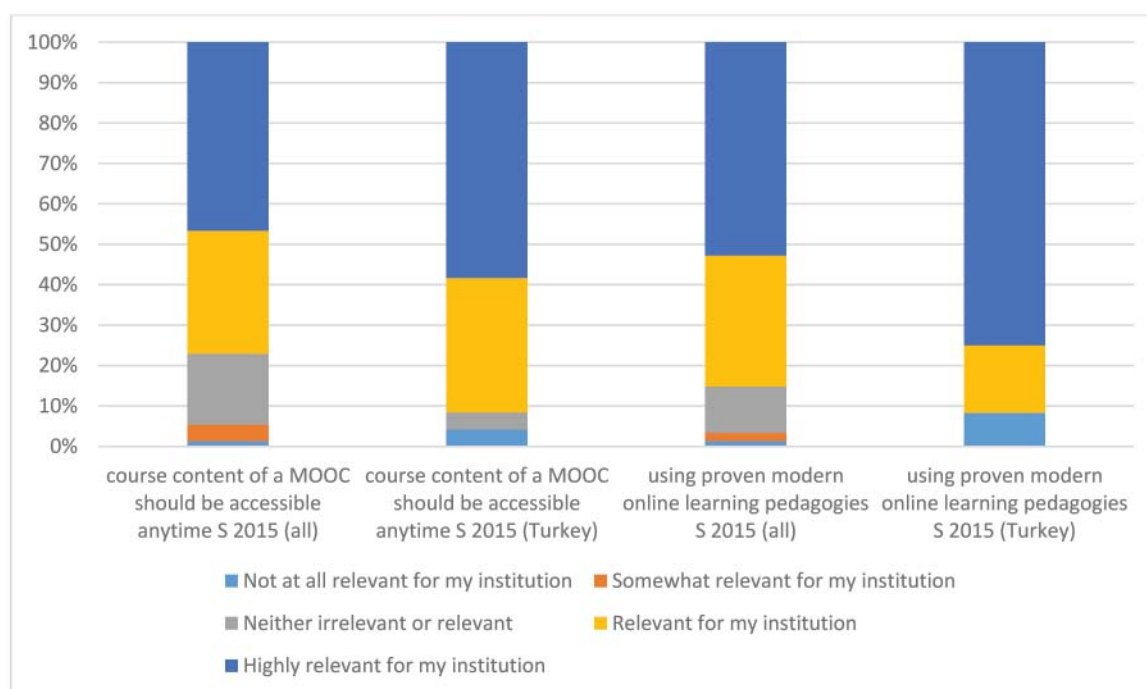
Course dimension in MOOCs means a unit of study that targets predetermined and/or emerging learning outcomes, consists of structured and semi-structured learning activities, and a designed learning environment. Regarding this dimension, total four questions were included into the survey. The first two questions were presented to explore the participant institutions preference about pace of learning. The first question asked whether the courses should have fixed start and end dates. Different than the overall EU participant institutions, a big majority of Turkish HE institutions (70.1%) preferred more structured MOOCs (fixed dates). The second question was about whether or not MOOC participants have the freedom to define their own pacing and finish whenever they want. Again, this idea was found relevant and highly relevant for more Turkish universities than overall EU institutions (Figure 13). The results concerning fixed dates for MOOCs can be understandable because the structured processes can be managed easier than others. However, this result conflicts with the results about the pace of learning. This part of the survey needs more in debt analysis.



**Figure 13: Self-Paced or Structured MOOCs**

Other two questions on the course dimension were about whether the course content should be accessible anytime (e.g. after the course completed) and MOOCs should be using proven modern online learning pedagogies. As can be seen in Figure 14, 91.6% of the Turkish participants favor the idea that MOOCs contents should be open and accessible anytime. This is again a higher percent than overall EU universities' preferences. The figure also shows that same as overall EU universities, almost all (91.7%) the Turkish participant universities likewise prefer using proven modern online learning pedagogies in MOOCs.

In addition to incentives of the institutions and their perception concerning the dimensions of MOOCs, the study was also sought to uncover the potential collaboration opportunities of the European universities on offering MOOCs. In the survey a list of areas the institutions may want to collaborate with other HE institutions was presented and the participants were asked to indicate their institutions likelihood to collaborate on these areas. Figure 15 presents the results derived from the data collected from the participant Turkish universities.

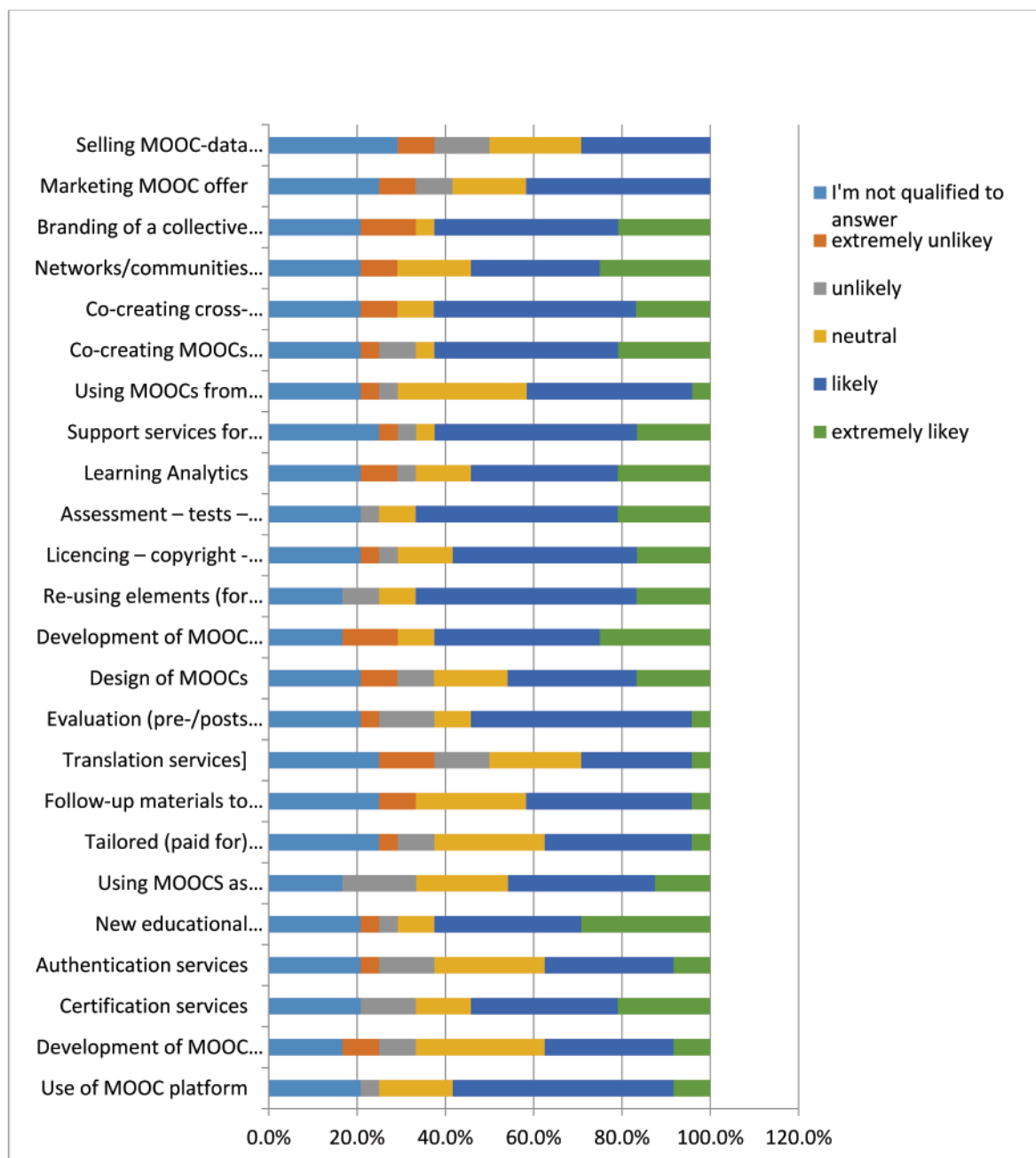


**Figure 14: Accessibility and Pedagogy of MOOCs**

One of the interesting findings about collaboration between institutions is on selling the MOOC data (e.g., for recruitment, advertisements). Only one third of the participants indicated that their institutions may collaborate on this area. Similarly, translation services (29%), tailored (paid for) follow-up courses (37.5%), authentication services (37.5%), and surprisingly development of MOOC platform (37.5%) seems the least likely collaboration areas. On the other hand, reusing elements (for instance OER, tests) from each other, MOOCs (66.7%) and assessment services (66.6%) are areas the Turkish institutions are open to collaborate. Similarly, new scalable educational services (62.5%), development of MOOC materials (62.5%), networks/communities on MOOCs (62.5%), co-creating MOOCs with other institutions (62.5%), co-creating cross-national educational programs based on MOOCs (62.5%), support services for participants, and branding of a joint (best research universities, etc.) initiative (62.5%) are other areas of collaboration. However, it seems that quite a number of responders have doubts about their qualification for answering this question.

The study additionally included a question to learn the potential outsourcing areas for MOOC initiatives of the universities. The survey provided a list of areas that institutions may want to outsource and the participants were asked to indicate their institutions likelihood to outsource these areas. Figure 19 presents the results derived from the data collected from the participant Turkish universities. Similar to previous question, quite a number of responders indicated that they are not qualified to answer the question (average 25%). Also, it seems that a few Turkish universities may outsource co-creating MOOCs with other institutions (45.8%), co-creating cross-national educational programs based on MOOCs (45.8%), branding (41.7%), new scalable educational services (41.7%), and certification services (41.6%).





**Figure 15: Collaboration Areas for MOOC Offerings According to the Turkish Universities**

As can be derived from the last two figures (Figures 15 and 16), a corporate academic mix seems likely to occur in Turkey. Since a large number of online learning (formal academic degree) providers (40 out of 68) are outsourcing their learning management (LMS) and content development processes (Hancer, 2016) this result can be understandable. Moreover, as many Turkish Institutions are going to be involved in MOOCs, the need for a regional cross-institutional collaboration schemes will increase. Especially as most of these HEIs cannot become partner of the big MOOC providers as they apply selective contracting policies to HEIs.



**Figure 16: Outsourcing Areas for MOOC Offerings According to the Turkish Universities**

## Conclusions and Recommendations

MOOCs are courses designed for large numbers of participants, that can be accessed by anyone anywhere as long as they have an internet connection, are open to everyone without entry qualifications, and offer a full/complete course experience online for free (OpenupEd, 2014). All around the world, there is a growing interest in both supply and demand sides of MOOCs (Bang, Dalsgaard, Kjaer & Donovan, 2016). This study intended to explore the European higher education institutions awareness, perspectives, adaptation strategies and refraining reasons regarding MOOCs.

Findings of this study show that more than half of the participant (54.1%) institutions has no MOOCs or plans to offer one and around 30% has the intention but no actions although the majority of the participant universities has distance education experience. The remaining participants indicated themselves as MOOC providers however investigation of their Web sites uncovers that only one fourth of them are really offering MOOCs and others offer just online courses but not MOOCs. In sum, the study reveals that a big number of Turkish HE institutions (participants) are not really aware of MOOCs. Those universities, on the other hand, that offer MOOCs does this mainly because of international and national visibility.

This unawareness and shortage of adaptation can be related to the following challenges for Turkish HE institutions as well as individuals:

- Language barriers – A big majority of MOOCs are in English and quite a number of Turkish citizens doesn't have English language skills even though the number is decreasing (TEPAV, 2013).
- Recognition – Recognition of prior learning (RPL) is a problematic area in Turkey and there is not enough quantity and quality of standards and regulations (Velciu, 2014). So, the institutions hesitate to recognize the prior learning. Even certificates issued by universities and especially by private institutions (e.g. NGOs, for-profit training centers, etc.) do not have enough reputation and often are not accepted by employees or other institutions.
- Reputation – Reputation of open and distance education is also problematic in Turkey. Due to un-successful past and current implementations, distance learning is not considered as valuable as face-to-face. The Higher Education Council (HEC), a government agency controls and takes all the decisions about HE in Turkey, encourages all the public universities to offer distance education (Latchem et al., 2009). However, the main reason behind this encouragement is related to income. Open and distance learning is considered as a good business rather than a form of delivery of instruction.
- Legislations – Although the government (via HEC) encourages the universities to offer open and distance learning, insufficient and problematic legislations barrier the development of the implementations.
- Knowhow – Although the country has a long history in open and distance learning, a big majority of universities does not have enough knowhow on online learning. In terms of training qualified human resources, there are only two masters (an online and a face-to-face) and one doctorate (PhD) level programs directly focusing on open and distance learning. All these programs offered by Anadolu University.
- Infrastructure – Some professors, experts or even institution are willing to offer MOOCs but they do not have access to the required technological infrastructure (Salar, 2013).

This section of the paper presents several recommendations to the policy makers in institutional and national levels developed based on the survey as well as networking activities conducted during the implementation of the HOME Project, literature and personal experiences.

### **National Level**

The Higher Education Council should take immediate actions to be able to widen the opportunities for accessing the courses offered in formal programs. In order to be able to do so, HEC can start with encouraging the current online learning providers to adapt a *freemium* model, a business model that covers the every-body's access to the course materials with no charge and collecting fees and tuitions from those learners who would like to get credits for their formal education. This opportunity will increase the demand for online learning and at the same time helps the opening up education movement.

Another action HEC should take is about recognition of MOOC completion certificates. Currently, certificates earned outside the learners own institution are often not accepted as a part of formal programs. HEC should establish baseline standards for for-formal-credit MOOCs and graduates of these MOOCs should be able to use the credits they earned into their formal programs.

HEC might work with the Scientific and Technological Research Council of Turkey (TUBITAK) to launch new calls for HE institutions and individual academicians to offer MOOCs. TUBITAK has already been offering some grand opportunities for open courseware projects. Similar funding opportunities can be offered to those who would like to offer MOOCs.

HEC should also encourage institutions to collaborate on MOOC offerings. Especially, those open and distance providers can be used as facilitators or coordinators for bringing close by institutions to establish alliances to offer MOOCs. These kinds of joint-initiatives can be financially supported via TUBITAK. The experienced institutions may only provide support to beginners on how to offer MOOCs and online courses.

HEC should also encourage institutions to offer MOOCs to educate refugees. Because of access to the technology problem, these MOOCs can be just MOC without online component or mobile MOOCs. HEC should provide funding and legal opportunities to the institutions work on innovative ways of offering flexible MOOCs to these groups.

Furthermore, the private initiatives concerning MOOCs should be encouraged by the government. Ministry of Education, Ministry of Science, Industry and Technology, Regional Development Agencies and some other governmental institutions have been providing some funds for lifelong learning projects. They can offer the same opportunities for MOOC initiatives. Especially those projects/initiatives offered by NGOs or civil societies can be prioritized.

Overall, HEC should work on a strategy to open up all the knowledge and expertise in the HE institutions to all the citizens. MOOCs must be considered as a part of this strategy.

### ***Institutional Level***

All institutions should consider offering MOOCs even though they do not have any prior online learning experience. Those inexperienced institutions or institutions with limited technological or other sources can learn from experienced ones. So the decision makers in these institutions should look for collaboration opportunities with the experienced ones or even private initiatives.

Institutions that have been offering open and distance learning should transform their courses into MOOCs and adapt different business models (*freemium*, openness, corporate) to be able to reach more audiences. It is becoming a fact that the more open up their courses the more students come to the formal programs.

Experienced ones should target various target groups including internationals. The number of students looking for education opportunity outside their own countries is increasing. Especially in Turkey, where there is a huge body of refugees from Syria and other countries, decision makers can use MOOCs to offer the educated refugees an opportunity to adapt to the country to implement their expertise and the uneducated ones an opportunity to learn the local culture and even acquire some skills to be able to find jobs or establish an initiative. Funding opportunities are available for these kinds of MOOC offerings even from the EU. Institutions should also offer MOOCs in different languages to be able to reach internationals. For instance, there is a huge potential in Africa, Turkish Republics, Middle East.

Decision makers in the universities should encourage and create opportunities to their professors to open up their course materials and courses. Adapting one financial source will not be enough for sustainability. So, the institutions should work on alternative models.

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