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WHO TAKES A MOOC? PROFILE OF STUDENTS IN THE FRAMEWORK OF A EUROPEAN PROJECT

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ABSTRACT

This research analyzes the profile of students on MOOC (massive open online courses) courses within the framework of the ECO project (E-learning, Communication and Open-Data: Massive Mobile, Ubiquitous and Open Learning) promoted by the European Union. An analysis of the profile of students enrolled in the five editions of the course entitled "Educational innovation and professional development. Possibilities and limits of technology" has been conducted based on the following objectives: (a) gain knowledge about the profile of students; (b) identify the students' perception of their level of digital competence for participating in the course; (c) find out what their real expectations were when they enrolled on the course; and (d) suggest proposals for improving the design of the course based on the study carried out on the student profile. This research shows the tendencies of students enrolled on these types of training processes and suggests improvements in the design of the course in order to satisfy the participants' motivations and expectations. In this regard, the results suggest that the design of MOOCs should be based on a sustainable, social and communicative curricular approach while at the same time greatly enhancing interaction and collaborative work.

Keywords: MOOC, higher education, virtual education, open education

INTRODUCTION

Following the expansion of the phenomena of massive open online courses (MOOC), different lines and areas of research have been addressed to reflect on the nature and implications of this training modality and there have been multiple reflections and contributions on the hypothetical disruptive potential of these courses which are currently experiencing a boom.

The abundant scientific literature generated with respect to the appearance and development of these courses has not prevented some subjects being addressed less frequently. Recent studies on the bibliometric impact of the scientific literature generated around MOOC highlight the scarcity of work aimed at analyzing the main characteristics of the participants in these types of experiences. In this regard, in the analysis of the

scientific literature carried out by Zancanaro and Domingues (2017) using the thematic classification by Liyanagunawardena, Adams, and Williams (2013) and Yousef, Chatti, Schroeder, Wosnitza, and Jakobs (2014), only five papers focused on analyzing the profile of the target audience were identified (Adamopoulos, 2013; Kravvaris, Ntanis, & Kermanidis, 2013; Sanchez-Gordon & Lujan-Mora, 2013, among others) compared to a considerably higher number of studies on other topics such as type of study, design and technology, conceptual aspects, business models, or learning theories.

Nonetheless, some studies have contributed to identifying the main characteristics of the profiles of MOOC participants. Research carried out in this area reveals that the user profile for these courses is a middle aged person with higher education qualifications and mostly from countries of the North whose main motivation is extending their knowledge, something which is also facilitated by the free nature of this training modality (Barcena, Martin-Monje, & Read, 2015; Bernal Gonzalez, Sanchez Vera, & Prendes Espinosa, 2016; Christensen et al., 2013; Daniel, 2012; Martin-Monje & Castrillo, 2016; Radford et al., 2014; Rubio, Fuchs, & Dixon, 2016; Telefonica Foundation, 2015; University of Edinburgh, 2013; White, Davis, Dickens, Leon, & Sanchez Vera, 2015). However, further research is required on the characteristics of students with the aim of being able to study in-depth the interpretation of the motivational, attitudinal and socio-economic factors, beyond the commonly recorded evidence (Alarios-Hoyos, Estevez-Ayres, Perez-Sanagustin, Delgado, & Fernandez-Panadero, 2017; Castano, Maiz, & Garay, 2015; De Waard et al., 2011; Fini, 2009).

The characterization of the socio-demographic profile is based on variables such as gender, age, geographical location or level of education. If the results provided by the HarwardX platform and University of Edinburgh (2015) platform are used as a reference, it can be seen that the platforms located in four English speaking countries (the US, UK, India and Canada) have more than half of all the students participating in these types of courses. Most of the participants (between 60-80%) have higher education qualifications and the average age is above 30 years old in the countries of the North, while in developing countries it is below 30. Although a greater number of men are identified, gender is closely related to the subject of the course.

As far as motivational aspects are concerned, the first studies carried out show that the participants are students or workers related to the subject of the course with the main motive being increasing knowledge and satisfying their curiosity (Brown, 2013; Kizilcec, Piech, & Schneider, 2013; Kolowich, 2012). It does not appear that other motivational factors whether they are obtaining qualifications or the possibility of interacting with other people with similar interests and being able to form part of a virtual community are reasons that lead people to participate in these experiences (Telefonica Foundation, 2015). In addition, recent contributions continue to show that these courses are generally taken because they extend knowledge without sufficient evidence being found to link the decision to take a MOOC to the possibility of accessing the labour market. On the other hand, the wide variety of subjects offered, along with the fact that a high percentage of participants already have a job, suggests that the MOOC phenomena far from constituting a threat to regulated university education, is in fact an opportunity and is complementary to it (Aguado, 2017).

A REVIEW OF THE CONTRIBUTIONS MADE IN RELATION TO MOTIVATIONAL ASPECTS

Firstly, given that the diversity and complexity of MOOC participants is not only linked to demographic and cultural aspects but rather to the objectives that the users pursue when enrolling on a course, it can be asked how the design and typology of MOOC influence the participants' enrolment potential. Despite the predominance of xMOOCs based on a controlled, teacher focused hierarchical model, various studies demonstrate the participants' preferences for courses based on a focus of connectivism, collaboration and a concept of learning that aims to place the student at the centre of these types of educational processes (Osuna-Acedo & Gil-Quintana, 2018; Yousef, Chatti, Wosnitza, & Schroeder, 2015).

Along these lines, some studies illustrate the relevance of the format and curricular design of the course (Bentley et al., 2014; Sanchez-Vera, Leon-Urrutia, & Huge, 2015), since these aspects can condition both the selection of the course as well as the involvement and participation of students (Hill, 2013a; 2013b) and have an influence on the completion rate (Yang, Shina, Adamson, & Rosa, 2013). The study by Rodriguez-Acaso and Boticario (2015) highlights the importance of providing a friendly and accessible format in the design of the course, key issues for engaging students.

Researching the curricular design of a MOOC course also implies questioning the underlying pedagogical and communicative model. Based on previous work in this field (Barcena & Read, 2015; Colpaert, 2016; Godwin-Jones, 2014; Perifanou, 2015; Read, 2014; Rubio et al., 2016; Sharples, Delgado, Dimitriadis, Garlatti, & Specht, 2015; Teixeira, Garcia-Cabot, Garcia-Lopez, Mota, & De-Marcos, 2016; Teixeira & Mota, 2014; Torres & Gago, 2014) the study by Sedano Cuevas (2017) identifies some of the premises on which the design of these courses should be focused in order to provide a suitable curricular and communicative design: contextualized and functional design; adaptive learning to detect needs, progress and shortcomings; modularity, flexibility and scalability; training and experiential assessment, collaboration tools and external social networks, gamification, ubiquity and adaptation to m-learning.

Some studies suggest the need to develop more sophisticated tools by educators, designers and programmers (Chang & Wei, 2016; Daniel, Vazquez Cano, & Gisbert, 2015), to improve adaptability in design, facilitating access through mobile devices and increasing the understanding of user profiles and needs (Brazuelo & Cacheiro, 2016; Dillahunt, Wang, & Teasly, 2015; Kim 2015). In addition, other works suggest the incorporation of gamification techniques in the planning, design, implementation and use of MOOCs through models based on collaboration (Gonzalez, Collazos, & Garcia, 2016). Given that enjoyment and fun are among the most important reasons for enrolling on a course (Belanger & Thornton, 2013), it is necessary to continue researching formulas and strategies required for courses to become sufficiently attractive and interactive.

On the other hand, it is relevant to continue looking at the specific needs of the participants. Although the literature in this field has shown that MOOCs experience high dropout rates (Armstrong, 2014; Belanger & Thorton, 2013; Fidalgo Blanco, Sein-Echaluce, & Garcia-Penalvo, 2015; Jordan, 2014; Koller, Ng, Do, & Chen, 2013; Poy & Gonzales-Aguilar, 2014; Yang et al., 2013), there needs to be an in-depth analysis of the design of courses and the way in which this design can facilitate the development of different training itineraries. Although in some courses taking all the modules for completion is required, in other cases the independent character of these allows participants to select contents and relevant tasks. Together with the information that the completion rate can provide, research on the students' evaluation of the course and their level of satisfaction is required (Gonzalez & Carabantes, 2017). There should be further analysis into these issues in order to carry out an adequate interpretation of the data based on a practical perspective, given that the participants may have resolved the cognitive needs that motivated their enrolment without having to take or complete the entire course (Aguado, 2017; Wang & Baker, 2018; Zhou, 2017).

Likewise, several studies question the findings and conclusions derived from calculations based on the completion rate. Users can see that their objectives have been achieved if they coincide with their initial expectations, which do not necessarily need to be linked to the completion of the course. In addition, the desirability of progressing towards hybrid designs capable of responding to the different needs of a wide and diverse number of people is recognized (Castano, Maiz, & Garay, 2015; Milligan, Littlejohn, & Margaryan, 2013; Yousef et al., 2015).

METHODOLOGY AND DESIGN OF THE RESEARCH

Research Objectives and Contextualization of the Study

The main objective of this research was to gain knowledge about the profile of students taking MOOC courses. In our opinion, this information is essential in order to achieve a greater adaptation of the pedagogical design of these courses to the expectations of the participants, something which can indirectly contribute to increasing completion rates, although this should not constitute the sole purpose in these types of processes (Koller et al., 2013).

This research has been carried out within the framework of a project aimed at the creation and development of MOOCs, entitled "Elearning, Communication and Open-Data: Massive Mobile, Ubiquitous and Open Learning (ECO)". The project focused on designing, developing and evaluating 17 MOOCs for trainers and teachers from all levels of education with the aim of providing them with the basic tools for developing these types of courses, mainly through mobile technologies, as well as the skills required for specialising in different fields according to the subject of the course (educational innovation, mobile communication

and learning, the possibilities of ubiquitous learning for avoiding social exclusion, the relationship between digital tools and the MOOCs themselves, among others). Participants enrolled in this project also have the opportunity to create their own MOOC. The main goal of this project is to broaden access to education and to improve the quality and cost-effectiveness of teaching and learning in Europe. From 54219 students who enrolled in the courses, 4000 became e-teachers with the option of developing their own MOOC in ECO. The project involved 24 partners from 9 different countries (Spain, Netherlands, United Kingdom, Portugal, Italy, Germany, France, Colombia and Argentina). Along with the wide range of courses offered, another significant aspect is the use of several languages (Spanish, Italian, English, etc.) for its development. The ultimate goal was not simply to attract users for these courses, rather this training scheme was presented as an opportunity to create communities of professionals who can use these open training strategies for their own professional development. This not only involves complex technological deployment, but also in-depth review of the pedagogy of MOOCs which maintains the motivation of the participants and enables the successful completion of the proposed courses.

Within the framework of the project described above, we decided to analyze the profile of students enrolled in the five editions (developed between 2014 and 2017) of the course entitled "Educational innovation and professional development. Possibilities and limits of ICT", shown in figure 1, with the purpose of achieving the following objectives:

- Gaining knowledge about the profile of the students enrolled on the MOOC course.
- Identifying the students' own perception of their level of digital competence.
- Finding out what their real expectations were when they enrolled on the MOOC course.
- Suggesting proposals for improving the design of the course based on the study carried out on the student profile.
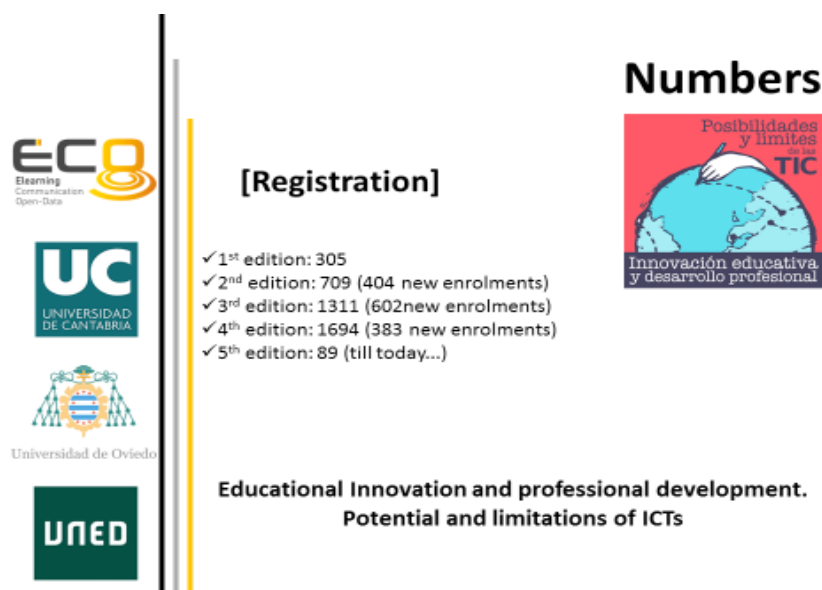

Figure 1. Evolution of enrolment in the 5 editions of the course

From a methodological perspective, the design of this research can be typified as quantitative, survey-based (McMillan & Schumacher, 2001).

Tool

For the analysis of the profiles, interests and expectations of students enrolled in the cited MOOC, a semi-structured questionnaire was designed. It is important to highlight that this questionnaire was replicated in all the editions of the MOOC analysed (5 editions) which allows us to exclude the formulation of items as a possible source of bias. In the following table (Table 1) the items included in the questionnaire that we designed.

Table 1. Items in the initial questionnaire 'Profiles, interests and expectations'

Classification variables: age, gender and initial training
What is your current academic and work situation?
Why have you decided to take this course?
What do you hope to achieve by taking this course?
How did you obtain information about this course?
If you are currently active, in which field of education and/or socio-educational intervention do you work?
If you are currently unemployed have you ever worked in education or socio-educational intervention?
If the answer is yes in which field?
Have you taken a MOOC before? If the answer is yes, how would you describe your experience?
Have you got any previous experience in education innovation projects involving ICT?
How do you value your previous knowledge on the development of education innovation projects involving ICT?
Do you consider yourself to be digitally competent, in other words, can you use a computer for editing texts, presentations, searching for information, watching videos, writing blogs, etc.?
Are you active in any social networks?
Have you ever designed an innovation project?
Indicate (in no more than 200 characters) what expectations you have of this training proposal

Sample and Analysis of Data

To carry out the study a non-probabilistic sample (convenience sampling) was used, a group of subjects on the basis of being accessible was selected for this purpose. The final sample rose to 715 subjects who voluntarily responded to the questionnaire sent at the start of each edition out of the 1789 students enrolled in the five editions of the course under analysis. This sample (n=715) allows us to assume a level of confidence of 99.00% (Z=2.58) with a sampling error of 4.00% (e) and a value of p and q of 0.5, as a safer option in these types of cases. We would like to highlight that the research team is conscious that the use of non-probabilistic sampling limits the generalization of results, as well as the performance of a certain type of analysis of the data collected.

For data analysis we used a descriptive technique rather than inferential statistics (for example, T for Student or their parametric alternatives) given the possibility of existing auto-selection bias (Birnbaum, 2004), both in relation to voluntary enrolment on the course and the response to the questionnaire (voluntary) and which could imply that the results were representative or not of a group (students taking a MOOC course at a generic level). Given this situation we decided to exclusively compare frequencies and percentages with the aim of identifying tendencies and differences, without considering the possible statistic meaning of these. These percentages have been calculated for each item on the questionnaire with respect to the total number of responses per edition and the overall total.

Finally, it is important to highlight that all the research meets the ethical guidelines, including adherence to the legal requirements, within the framework of the ECO project. Participants were informed of academic usage and information privacy principles.

RESULTS

In the following section we will look at some of the main results of the study and their relation to our research objectives.

Student Profile

One of the first issues students were asked about was their age. In our opinion, we regarded it as a factor that could allow us to anticipate some of the possible problems linked to the management of the platform and monitoring MOOC. Of the total number of students who answered the questionnaire in the 5 editions (Ed) of the course (n=715) more than 28% (28.25%; n=202) belonged to the age range between 30-40

years old, while nearly 25% were aged between 40-50 years old (24.9%; n=178). The next largest group was aged between 18 to 25 years old (20.84%; n=149) followed by the group aged between 25 and 30 years old (14.13%; n=101). The least represented groups in the course were those aged between 50 and 60 years old, higher than 9% (9,37%; n=67) and those over 60 years old (2.52%; n=18).

Table 2. Age of participants

Age	1st_Ed		2nd_Ed		3rd_Ed		4th_Ed		5th_Ed		TOTAL	
	f	%	f	%	f	%	f	%	f	%	f	%
18-25	30	19.23%	14	11.76%	78	31.33%	27	16.36%	0	0.00%	149	20.84%
25-30	27	17.31%	17	14.29%	35	14.06%	19	11.52%	3	11.54%	101	14.13%
30-40	49	31.41%	35	29.41%	69	27.71%	48	29.09%	1	3.85%	202	28.25%
40-50	33	21.15%	33	27.73%	41	16.47%	52	31.52%	19	73.08%	178	24.90%
50-60	14	8.97%	18	15.13%	20	8.03%	14	8.48%	1	3.85%	67	9.37%
> 60	3	1.92%	2	1.68%	6	2.41%	5	3.03%	2	7.69%	18	2.52%
Totals	156	100%	119	100%	249	100%	165	100%	26	100%	715	100%

In addition, the analysis of the data collected in the five editions of the MOOC show that more than 62% of those who participated were women (62.52%; n=447) while 37% were men (37.20%; n=266).

Table 3. Gender of participants

Gender	1st_Ed		2nd_Ed		3rd_Ed		4th_Ed		5th_Ed		TOTAL	
	f	%	f	%	f	%	f	%	f	%	f	%
Women	93	59.62%	78	65.55%	155	62.25%	105	63.64%	16	61.54%	447	62.52%
Men	63	40.38%	41	34.45%	92	36.95%	60	36.36%	10	38.46%	266	37.20%
DK*	0	0.00%	0	0.00%	2	0.80%	0	0.00%	0	0.00%	2	0.28%
Totals	156	100%	119	100%	249	100%	165	100%	26	100%	715	100%

Note: DK (Don´t Know responses).*

The participants' level of education was one of the variables we considered needed further analysis, since we wanted to find out whether the MOOCs were facilitating access to education for people with lower levels of education or, on the contrary, they were being used mainly by people with higher levels. Data collected reveals that more than 94% of the students had a university degree (94.27%; n=674). The next largest group consisted of people with medium or higher professional training (3.50%; n=25) followed by those who had completed secondary education (1.68%; n=12).

Likewise, we wanted to know if the participants' level of education was related in any way with the subject being studied. While the results revealed that more than 43% (43.22%; n=309) of the participants had an access qualification that was not linked directly to the subject addressed, we found that a significant number of students had taken studies related to the subject (the development of innovative practices with technology). Therefore, almost 28% had undertaken studies in the field of knowledge relating to educational sciences: Teacher Education (27.55%; n=197), Pedagogy (15.80%; n=113) or Social Education (3.08%; n=22) or other related fields, for example, Psychology (4.06; n=29).

Table 4. Participants' studies

Q*	1st_Ed		2nd_Ed		3rd_Ed		4th_Ed		5th_Ed		TOTAL	
	f	%	f	%	f	%	f	%	f	%	f	%
TE*	42	26.92%	24	20.17%	95	38.15%	32	19.39%	4	15.38%	197	27.55%
Ped*	21	13.46%	23	19.33%	33	13.25%	30	18.18%	6	23.08%	113	15.80%
Psy*	1	0.64%	3	2.52%	1	0.40%	2	1.21%	0	0.00%	7	0.98%
PsyP*	6	3.85%	4	3.36%	12	4.82%	5	3.03%	2	7.69%	29	4.06%
SE*	5	3.21%	6	5.04%	5	2.01%	6	3.64%	0	0.00%	22	3.08%
SW*	0	0.00%	0	0.00%	3	1.20%	2	1.21%	0	0.00%	5	0.70%
Sclgy*	1	0.64%	0	0.00%	4	1.61%	0	0.00%	0	0.00%	5	0.70%
Others	72	46.15%	50	42.02%	85	34.14%	88	53.33%	14	53.85%	309	43.22%
DK	8	5.13%	9	7.56%	11	4.42%	0	0.00%	0	0.00%	28	3.92%
Totals	156	100%	119	100%	249	100%	165	100%	26	100%	715	100%

Note. Q* (Qualifications): TE* (Teacher Education); Ped* (Pedagogy); Psy* (Psychology); PsyP* (Psychopedagogy); SE* (Social Education); SW* (Social Work); Sclgy* (Sociology).

At the same time, we tried to find out about the students' employment situation since this could be determining their level of participation in the different activities that formed part of this educational process. According to our results we could see that more than 64% of those who answered the questionnaire (64.06%; n=458) were working in parallel to the MOOC. The second largest group consisted of those who were unemployed (18.88%; n= 135), while almost 17% of the participants were doing some type of training while participating in the MOOC (16.64%; n=119).

Table 5. Participant's employment situation

Current Employmen Situation	1st_Ed		2nd_Ed		3rd_Ed		4th_Ed		5th_Ed		TOTAL	
	f	%	f	%	f	%	f	%	f	%	f	%
Active	110	70.51%	76	63.87%	128	51.41%	121	73.33%	23	88.46%	458	64.06%
Unemployed	25	16.03%	22	18.49%	57	22.89%	30	18.18%	1	3.85%	135	18.88%
Student	21	13.46%	21	17.65%	63	25.30%	13	7.88%	1	3.85%	119	16.64%
DK	0	0.00%	0	0.00%	1	0.40%	1	0.61%	1	3.85%	3	0.42%
Totals	156	100%	119	100%	249	100%	165	100%	26	100%	715	100%

Level of Digital Competence

Given the subject of the MOOC course, the development of innovative projects with information and communication technologies, we considered it necessary to try to understand what the previous experiences of the students participating in the course were with regard to this issue. In other words, we wanted to find out whether the participants had participated in any experience that had been considered innovative involving the use of digital technology. Consequently, we found that more than half of the students who answered the questionnaire (51.47%; n=368) had not taken part in the development of these types of experiences.

Table 6. Participants' previous experience of innovative education

Previous Experience	1st_Ed		2nd_Ed		3rd_Ed		4th_Ed		5th_Ed		TOTAL	
	f	%	f	%	f	%	f	%	f	%	f	%
Yes	66	42.31%	56	47.06%	116	46.59%	80	48.48%	15	57.69%	333	46.57%
No	87	55.77%	61	51.26%	127	51.00%	82	49.70%	11	42.31%	368	51.47%
DK	3	1.92%	2	1.68%	6	2.41%	3	1.82%	0	0.00%	14	1.96%
Totals	156	100%	119	100%	249	100%	165	100%	26	100%	715	100%

In parallel, we tried to find out whether those participating in the course had previously designed any kind of educational innovation project with technology. We found that almost 68% of the sample who answered the questionnaire had never designed this type of experience (67.97%; n=486), compared to 30% who said they had some kind of previous experience in the design of innovation projects which involved the use of information and communication technologies (30.63%; n=219).

At the same time and taking into account the subject matter, we believed it necessary to investigate the perception that students had of themselves with regard to their level of competence in managing digital devices (editing texts, searching for information, preparing presentations, etc.). We found that most students considered their level of managing these types of tools was quite good (40%; n=286). Similarly, nearly 30% of students considered their level of digital competence was quite good (29.93%; n=214) while more than 28% considered it sufficient (28.53%; n=204).

We also asked students about their level of activity in their use of social networks (such as Facebook, Pinterest, etc.) as some of the designed MOOC activities were developed through these virtual spaces. We were able to identify that most of the participating students considered themselves active in social networks (72.73%; n=520), compared to the group who said that they did not usually use these types of tools (25.45%; n=182).

Table 7. Self-perception on the management of SNS

Are you active in SNS?	1_Ed		2_Ed		3_Ed		4_Ed		5_Ed		TOTAL	
	f	%	f	%	f	%	f	%	f	%	f	%
Yes	101	64.74%	91	76.47%	196	78.71%	117	70.91%	15	57.69%	520	72.73%
No	53	33.97%	26	21.85%	47	18.88%	45	27.27%	11	42.31%	182	25.45%
DK	2	1.28%	2	1.68%	6	2.41%	3	1.82%	0	0.00%	13	1.82%
Totals	156	100%	119	100%	249	100%	165	100%	26	100%	715	100%

Note: SNS (Social Network Sites)

Student Expectations

Finally, we looked in-depth at the expectations the students had when they enrolled in this MOOC course. In our opinion, a better understanding of the students' possible intentions or expectations could help us to improve the future design of courses and lead to the adoption of curricular decisions that would enable responding to them.

Thus, we could verify that the majority of students tried to learn as much as possible about the subject dealt with in the course (79.58%; n=569). Although this was the most common objective among students, some of them did not have a particular interest in completing the process, rather they wanted to access the open material on the course, thus recognizing their overall involvement would not be very high (10,21%; n=73%). Likewise, almost 8% (7.55%; n=54) of the sample expressed their main interest to be knowing what a MOOC course consisted of and what the main characteristics of these types of training processes were.

Together with the students' intentions, we wanted to understand what they wanted to achieve on completion of this course, in other words, what use they thought this this experience was going to have with regard

to their personal or professional development. Thus, almost 84% enrolled with the expectation that the experience would enable them to extend their previous education (83.92%; n=600). Other results show that more than 8% of the sample (8.11%; n=58) believed that completing the training process would improve their work situation, while just over 5% hoped that the course would increase their chance of gaining employment in an institution related to the general subject of the MOOC (5.03%; n=36).

Table 8. Motives for taking the course

Why did you decide to take this course?	1_Ed		2_Ed		3_Ed		4_Ed		5_Ed		TOTAL	
	f	%	f	%	f	%	f	%	f	%	f	%
Extend my training	134	85.90%	102	85.71%	209	83.94%	131	79.39%	24	92.31%	600	83.92%
Improve my work situation	13	8.33%	10	8.40%	20	8.03%	14	8.48%	1	3.85%	58	8.11%
Gaining employment	3	1.92%	6	5.04%	14	5.62%	12	7.27%	1	3.85%	36	5.03%
Others	6	3.85%	1	0.84%	6	2.41%	7	4.24%	0	0.00%	20	2.80%
DK	0	0.00%	0	0.00%	0	0.00%	1	0.61%	0	0.00%	1	0.14%
Totals	156	100%	119	100%	249	100%	165	100%	26	100%	715	100%

DISCUSSIONS AND CONCLUSION

The study we have carried out has allowed us to understand the profile and intentions of students enrolled on these types of training processes. Our analysis has helped to define the characteristics of the participants' profiles, as well as identify some improvements in the future design of these types of courses in an attempt to satisfy the motivations and expectations of the people who take them.

With regard to the socio-demographic characteristics, we identified that the results are in line with the findings of other studies conducted on this subject and demonstrate a similar student profile: a middle-aged person, in employment and with higher education qualifications. Although most of them did not come from the field of education, we found that a significant number of students had studies linked to the subject developed, in other words, the design and development of training experiences at different levels of education. As suggested by other studies, the differences with regard to gender could be related to the field of education in which the course is framed, since it is an area mainly made up of women (Bernal Gonzalez, Sanchez Vera, & Prendes Espinosa, 2016).

Together with the general characteristics of the student profile, the study has provided further insight into certain aspects which help to clarify motivational aspects, as well as the skills required to participate in these types of processes. On the one hand, the information collected on the participants' digital competence corroborates that the selection of this type of course is directly related to technological skills and the prerequisites linked to certain skills required by the participants (Garcia, Tenorio, & Ramirez, 2015; Ramirez, 2013; Sanchez-Vera, Leon-Urrutia, & Huge, 2015), as well as a high level of autonomy, typical of graduate students (Brown, 2013). On the other hand, the results demonstrate the participants' expectations, the need to extend their knowledge being the main motivation, as indicated by studies carried on the profile of participants. The lack of attention given to the issues linked to accessibility or the existence of resources that facilitate translation into another language, given that the course has subtitles in English is a determining factor in the selection (Bernal Gonzalez, 2015).

The study carried out highlights the need to continue conducting further research in order to examine in-depth the findings referred to earlier. Since our study corroborates the profile of the participant as a lifelong student (De Waard et al., 2011; Hill, 2013b; Liyanagunawardena et al., 2013; Lemos de Carvalho, Cebrian Robles, Cebrian De la Serna, & Raposo, 2019), we have to question the promise of the democratization of knowledge on which MOOC were based in order to create strategies that help to transform the general tendency that means that most participants on these types of courses have higher education qualifications.

Despite the hypothetical disruptive potential of these courses and free training under equal conditions (Christensen et al., 2013; Cooperman, 2014; Daniel, 2012; Radford et al., 2014; Torres & Gago, 2014), the data seems to suggest that, on the contrary, the digital divide has been reinforced, excluding participants who were supposedly going to benefit from the MOOC revolution, to the extent that the profile of participants still does not include a significant number of people without higher education in the countries of the South and North. Therefore, increasing strategies to provide training in different contexts and the possibility of guaranteeing lifelong education to the world population becomes a priority (UNESCO, 2013), as well as facilitating digital inclusion, in an attempt to develop policies of redistribution that allows maximizing the benefits of a training modality that until now, has been mainly used by a reduced group of the population that already has some experience of higher education (Caballo, Caride, Gradaille, & Pose, 2014; Chauhan, 2014; Jagannathan, 2015; Medina-Salguero & Aguaded, 2014; Rohs & Ganz, 2015).

In view of the results obtained, we consider that this type of work allows us to extract some learning that should be taken into account when thinking about the design of these types of courses. Continuing along the lines of previous work, that have tried to link the objectives of the participants taking into account the typology of this training modality (Osuna-Acedo & Gil Quintana, 2018; Yousef et al., 2015). The results of our research suggest that we must not lose sight of the fact that the design of these experiences should try to satisfy the needs related to lifelong learning (Kop, 2011), the pursuit of personal improvement, the expansion of knowledge and online learning (Downes, 2012; Siemens, 2005) and the review, reuse, redistribution or remixing of content (Wiley, 2007).

The diversity of intentions that motivate the participation of students on the course, shows that the curricular design of these experiences needs to become more flexible, promoting different itineraries, creating spaces for participation which promote a horizontal model of the reconstruction of knowledge, designing strategies focused on promoting interaction between the participants in these types of experiences (Mackness, Bell, & Funes, 2016; Mackness, Mak, & Williams, 2010; Zawacki-Richter & Anderson, 2014; Zawacki-Richter, Bozkurt, Alturkim, & Aldraiweesh, 2018). In this regard, the results suggest that the design of MOOCs should be based on a social and sustainable curricular and communicative approach, while at the same time fostering interaction and collaborative work. From a pedagogical perspective, the openness that appears to be demanded by students, leads us to link the design of these experiences to the critical curricular tradition, creating environments in which, far from assuming a unidirectional model of communication and educational relationships which are clearly hierarchical, favours interaction and cognitive conflicts between the participants, basing the experiences on more open curricular design, less linked to formal educational processes (De Waard et al., 2011; McLoughlin, 2013). From a communicative point of view, the profiles and interests of participating students suggest that communicative models with a clear focus on communication should be promoted, that is, designed experiences that allow interaction and exchange in order to achieve some shared learning objectives, avoiding the intoxication of contents and pursuing the functionality of the experiences in order to enhance interaction between the participants (Gillani, 2013).

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