v. 3, n. 10, 2023

Journal of
Engineering
Research

MOOC'S FOR CONTINUOUS TRAINING IN INFORMATION TECHNOLOGY

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Abstract: The training of the Autonomous University of Campeche community during the COVID-19 pandemic was completed through the Coursera for Campus program. This paper presents the methodology and analysis of the results obtained from the university community that participated in the platform program in the area of Information Systems.
Keywords: *Online Courses, Information Technology, Training, Education MOOC's*

INTRODUCTION

The digital transformation was a necessity and a requirement with respect to the advancement of knowledge and society [1].

All educational institutions as a result of the COVID-19 pandemic have implemented strategies where they have made use of digital tools, such is the case of open online courses, including the use of massive open online courses or better. known as MOOCs (Massive Open Online Courses). These types of courses offer learning that is characterized by its non-linear and asynchronous nature, that is, it is possible for the student to learn at their own pace, due to the ease due to the non-existence of a physical space [2][3].

There are many organizations that currently offer MOOCs in different areas of knowledge, however the institution chose Coursera, because it provides several advantages over others, among them: it is an educational platform associated with prestigious universities and leading companies that support projects, certificates and professional credentials. [4].

Coursera based learning on four key ideas: the effectiveness of online learning, learning for mastery, peer assessment, and blended learning. The link to their page is: https://www.coursera.org/ [5].

MOOCs are born from the first experiences to share online content of face-to-face courses. The limitations of interaction with "students" from other parts of the world generate this proposal that allows the generation of an audience that goes beyond acquiring the content, incorporating a learning process in which a teacher (usually a team) and a peer group [6].

Massive online courses have revolutionized the way in which higher education is approached worldwide, mainly in certain topics of interest and for the most developed countries. The use of MOOCs has particularities, considering the open and massive nature that presupposes an immense diversity of students, which makes it almost impossible to provide personalized monitoring, only in a general way [7].

Due to generalization, completion statistics are low and raise concerns about the effectiveness of courses in achieving the desired effect on the learner when they do not take an active role in their own learning processes [8]. This has caused notable attention to the evolution of MOOCs that is manifested in the publications and results obtained on the subject already mentioned [9].

MOOCs are clearly defined by their open nature (open), by locating the information and the relationship between the different educational actors on the internet (online) and by the fact that the size of the educational community involved in a course of these characteristics can easily exceed thousands of people [10]. For this reason, MOOCs have attracted worldwide interest due to their great potential to offer free, quality and accessible training to anyone regardless of their country of origin, their previous training and without the need to pay for their enrollment.

Fernández-Ferrer (2019) mentions that MOOCs offer advantages for participants, both for the opportunity to enroll, as well as the benefits of completing them, because they have high-level information and allow access to knowledge that most teachers

do not have, opening the possibility of a relationship between universities and schools, in conjunction with teaching and research. On the contrary, one of the criticisms of these tools considered as a disadvantage is the information accumulated on the platform, accompanied by a marked lack of digital training for teachers, as well as difficulties in the evaluation by teachers. Another point against that influences as a disadvantage, is the request for prerequisites before registering for a course, in addition to a low participation that ends up in courses not completed.[11]

METHODOLOGY

Taking into account the types of research studies, this work was carried out as follows according to the following classifications:

1) Depth of the planned search for the knowledge that is intended to be obtained is of a typical descriptive type, since it exposes the characteristics of a single sample.

2) The intervention of the researcher on the phenomenon studied is of the Observational type, its main objective is to "Observe and record" those events of interest for the study, without altering or intervening in their natural course.

3) Source of data collection is field, because they were collected in the place of occurrence of the phenomenon, which is the administrative platform of Coursera.

4) The purpose pursued by the research is of a basic type and is oriented towards the accumulation of information or the formulation of a theory, directing the research on remote education with the help of the Coursera platform.

5) Data collection is cross-sectional, since they are collected in a single moment, in a single time. (Rodriguez & Cabrera, 2007)

POPULATION TO OBSERVE

People participating in the Coursera for Campus Program taught in the period May-December 2020.

VARIABLES

The variable to observe are the people who registered in the courses taught in the period May–December 2020.

DEVELOPMENT

In this paper we will focus on the results obtained from the incorporation of the Autonomous University of Campeche, in the Coursera for Campus program.

For this, the methodology used is presented:

After entering the platform, the Analysis section is chosen and the filter is generated to obtain student activity from May 1 to December 31, 2020, as shown in Figure 1.

Figure 1. Analysis section.

Source: self made

Once filtered by date, a table of records is displayed as shown in Figure 2 with the list of courses, their subject area, the date of the first registration, the date of the last registration, the number registrations, number of active registrations, number of participants who completed courses and the percentage of participants who completed courses

Figure 2. Table of records.

Source: self made

In the records table, click on the title of the thematic area column so that it is arranged alphabetically and later download the results by clicking on the three-dot icon and selecting download in Excel format.

Once the Excel format has been downloaded, we open the file and a table with all the course information will be shown. We can use the filter to select courses from one of the knowledge areas as shown in Figure 3.

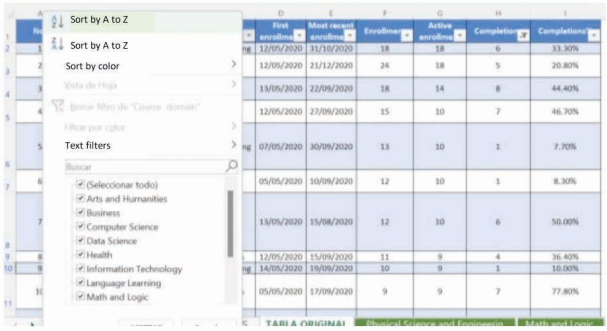

Figure 3. Filtering in Excel.

Source: self made

The statistical processing of the data was carried out through Microsoft Excel, with the help of the tools provided for descriptive studies.

CONCLUSIONS

Of the total of 404 courses taught, 74 were on data science, information technology, computer science and computing. The foregoing represents that more than 18% of the courses of interest were on topics related to computing and technology. Figure 4 shows the distribution of courses by area.

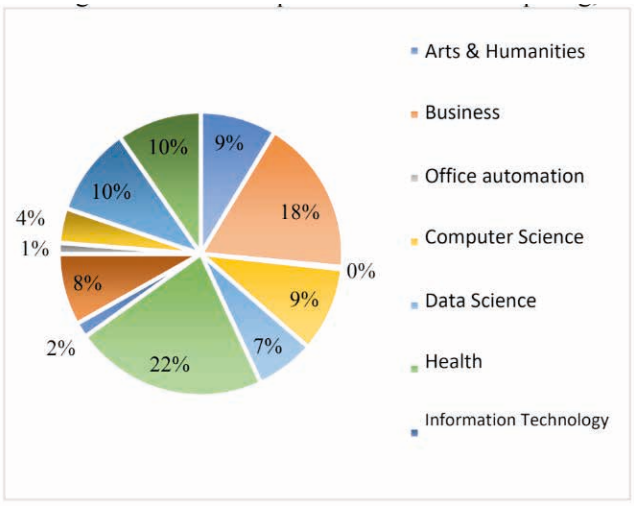

Figure 4. Percentage of courses taught in total.

Source: self made

However, it is highly relevant that only 20 of the 74 were fully completed.

Figure 5 shows 1 requested course on Computing, 37 on Computer Science, 27 on Data Science and 7 on Information Technology. Subsequently, it is observed how the graph decreases with respect to the activity of the courses, until reaching 0 completed in the area of Computing, 13 in Computer Science, 5 in Data Science and 2 in Information Technology. Hence, it is stated that the MOC's in computer science and information technology require complementary strategies to ensure their successful completion.

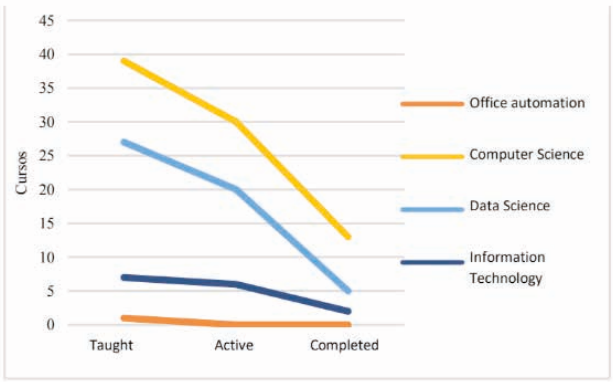

Figure 5. Status of the courses.

Source: self made

Figure 6 shows the 146 people who were interested in the 74 courses, what their behavior was during the evaluated period and that only 32 completed successfully.

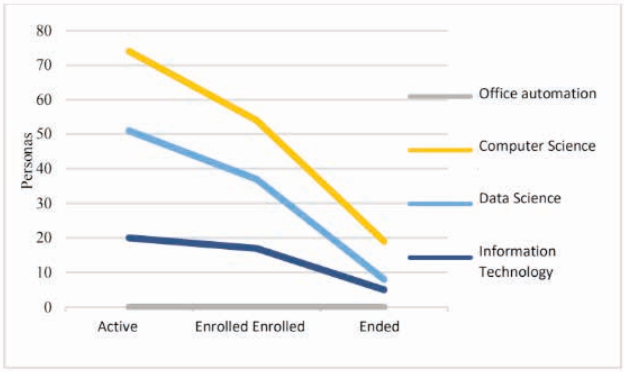

Figure 6. Behavior of participating people.

Source: self made

It is recommended to improve the terminal efficiency of the MOC's referring to data science, information technology, computer science and computing, conduct a study on the people who participated to find out the causes of their desertion and in the case of those that culminated successfully, to know what the success factors were.

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