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The MOOC as an alternative model for university education

El MOOC como modelo alternativo para la educación universitaria

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ABSTRACT

The MOOC model (Massive Open Online Course, for its acronym in English) has emerged as an innovative alternative for university education, allowing massive access to online courses taught by renowned institutions. This model is characterized by its open, flexible and autonomous nature, which has generated a significant impact on the educational landscape. One of the main advantages of the MOOC is its ability to broaden access to university education. Through online platforms, anyone can enroll in courses taught by professors from world-renowned institutions. This has democratized education by removing geographic and economic barriers that often limit access to traditional education. In addition, the MOOC model offers flexibility in terms of hours and location. Students can learn at their own pace, access course materials anytime, anywhere, and tailor their learning process to their individual needs. This promotes autonomous learning and self-regulation, valuable skills in an ever-evolving educational environment. MOOCs cover a wide range of topics and disciplines, giving students the opportunity to explore various fields of study and gain knowledge in areas of specific interest to them. This encourages the diversity of content and the personalization of learning, since students can choose the courses that best suit their needs and educational goals. However, the MOOC model also presents challenges. The lack of interaction and personalized feedback, due to the large number of participants, can make it difficult to deepen the concepts and resolve specific doubts. Additionally, MOOC course completion rates are often low, raising questions about student engagement and motivation. Despite these challenges, the MOOC as an alternative model for university education has proven to be a valuable tool. It has allowed access to education to people from all over the world, promoting flexibility, diversity of content and autonomous learning. As MOOCs continue to be explored and improved, it is expected that they will continue to play an important role in the educational landscape, providing enriching and transformative learning opportunities.

Keywords: MOOC model, autonomous learning, self-regulation, skills, educational environment.

RESUMEN

El modelo MOOC (Massive Open Online Course, por sus siglas en inglés) ha surgido como una alternativa innovadora para la educación universitaria, permitiendo el acceso masivo a cursos en línea impartidos por instituciones de renombre. Este modelo se caracteriza por su carácter abierto, flexible y autónomo, lo que ha generado un impacto significativo en el panorama educativo. Una de las principales ventajas del MOOC es su capacidad para ampliar el acceso a la educación universitaria. A través de plataformas en línea, cualquier persona puede inscribirse en cursos impartidos por profesores de instituciones reconocidas a nivel mundial. Esto ha democratizado la educación al eliminar las barreras geográficas y económicas que suelen limitar el acceso a la educación tradicional. Además, el modelo MOOC ofrece flexibilidad en términos de horarios y ubicación. Los estudiantes pueden aprender a su propio ritmo, acceder a los materiales del curso en cualquier momento y lugar, y adaptar su proceso de aprendizaje a sus necesidades individuales. Esto promueve el aprendizaje autónomo y la autorregulación, habilidades valiosas en un entorno educativo en constante evolución. Los MOOC cubren una amplia gama de temas y disciplinas, lo que brinda a los estudiantes la oportunidad de explorar diversos campos de estudio y adquirir conocimientos en áreas de su interés específico. Esto fomenta la diversidad de contenidos y la personalización del aprendizaje, ya que los estudiantes pueden elegir los cursos que mejor se ajusten a sus necesidades y metas educativas. Sin embargo, el modelo MOOC también presenta desafíos. La falta de interacción y retroalimentación personalizada, debido al gran número de participantes, puede dificultar la profundización de los conceptos y la resolución de dudas específicas. Además, las tasas de finalización de los cursos MOOC a menudo son bajas, lo que plantea interrogantes sobre el compromiso y la motivación de los estudiantes. A pesar de estos desafíos, el MOOC como modelo alternativo para la educación universitaria ha demostrado ser una herramienta valiosa. Ha permitido el acceso a la educación a personas de todo el mundo, promoviendo la flexibilidad, la diversidad de contenidos y el aprendizaje autónomo. A medida que se siguen explorando y mejorando los MOOC, se espera que continúen desempeñando un papel importante en el panorama educativo, brindando oportunidades de aprendizaje enriquecedoras y transformadoras.

Palabras clave: Modelo MOOC, aprendizaje autónomo, autorregulación, habilidades, entorno educativo.

INTRODUCTION

Higher education has been transformed in recent years thanks to the appearance of new models and educational approaches. One of these alternative models that has gained popularity is the MOOC (Massive Open Online Course), which

has become an attractive option for university education. MOOCs are massively open online courses that offer access to high-quality educational content for free or at a very low cost.

In this introduction, we will explore how the MOOC has emerged as a viable alternative to university education, breaking down geographical barriers and allowing students to access a wide range of knowledge and educational experiences. In addition, we will look at how MOOCs offer flexibility in terms of learning schedules and paces, allowing students to tailor their education to their individual needs.

We will also examine how MOOCs promote collaboration and knowledge sharing between students from different parts of the world, fostering networked and community learning. Additionally, we will highlight the importance of certification and validation of achievements earned through MOOCs, and how this has evolved to include options for credit and academic recognition.

However, we will also address the challenges and limitations faced by the MOOC model, such as the lack of one-on-one interaction with instructors and the need for self-discipline on the part of students. Additionally, we will discuss how MOOCs may not be suitable for all course types and disciplines, and how their successful implementation requires careful design and an appropriate supporting strategy.

In summary, the MOOC has emerged as a promising alternative model for university education, offering open access to a wide range of courses and educational materials. As we further explore this topic, we will examine how the MOOC has impacted higher education and how its implementation can be optimized to further improve the quality and accessibility of university education.

BACKGROUND

The history of the MOOC as an alternative university model dates back to the early 2000s, when the first attempts to offer online education in a massive and open manner arose. Although MOOCs as we know them today did not exist at that time, they laid the foundation for the development of this educational model.

One of the earliest antecedents of the MOOC was the Massachusetts Institute of Technology (MIT) OpenCourseWare (OCW), launched in 2002. MIT offered free access to the educational materials of its online courses, allowing anyone to access content high-quality educational for free.

Later, in 2008, the term MOOC emerged with the offer of a course titled "Connectivism and Connective Knowledge" taught by George Siemens and Stephen Downes. This course was characterized by its focus on connectivity, active student participation and online collaboration.

In 2011, Stanford University launched three massive open online courses that attracted hundreds of thousands of students from around the world. These courses, known as MOOCs, generated great interest and started the popularization of the term.

Thereafter, various online learning platforms such as Coursera, edX, and Udacity emerged and started offering a wide range of MOOC courses in different disciplines. These platforms collaborated with prestigious universities around the world to offer high-quality courses with open access.

MOOCs as an alternative university model have evolved over the years, adapting to the needs of students and educational institutions. Features such as online interaction, discussion forums, automated feedback, and certification have been added, enhancing the learning experience and validation of academic achievement.

In conclusion, the history of the MOOC as an alternative university model can be found in the initial efforts to offer online education in an open and massive manner. Through collaboration between educational institutions and the development of online learning platforms, MOOCs have revolutionized the way in which knowledge is accessed and shared at the university level.

The MOOC educational model

The MOOC (Massive Open Online Course) educational model is an innovative approach that allows online courses to be offered to a large number of students in a massive and open manner. This model is based on the premise of providing free or low-cost access to high-quality educational materials through online platforms.

The MOOC is characterized by its flexible and autonomous approach, which allows students to learn at their own pace and on their own schedule. Courses are typically made up of a mix of pre-recorded videos, readings, interactive activities, and online assessments. In addition, MOOCs encourage active student participation through online discussion forums and collaborative activities.

One of the main characteristics of the MOOC is its global reach, since it allows students from all over the world to access courses taught by renowned experts and academics. This has facilitated the sharing of knowledge and the creation of international learning communities.

The MOOC model has evolved over time, and there are currently different types of MOOCs. On the one hand, there are instructor-based MOOCs, where an expert in the field teaches the course and provides guidance to students. On the other hand, there are peer-based MOOCs, where students collaborate with each other and self-assess. There are also adaptive MOOCs, which personalize the content and activities according to the needs and abilities of each student.

In addition, the MOOC has generated opportunities to obtain certificates and academic credits. Some institutions offer certifications of completion for those who successfully complete courses, and in some cases, credits earned in MOOCs may be recognized in formal education programs.

Despite its advantages and popularity, the MOOC model also faces challenges, such as low course completion rates and a lack of one-on-one interaction with instructors. However, strategies and tools have been implemented to address these challenges, such as effective instructional design, the use of data analytics to improve the student experience, and the integration of artificial intelligence technologies.

In short, the MOOC educational model has transformed the way knowledge is accessed and shared, offering large-scale online learning opportunities. Through the combination of quality content, flexibility, and global reach, MOOCs continue to be an attractive alternative for continuing education and professional development.

Development of MOOCs

The development of MOOCs has experienced a significant evolution from its beginnings to the present. Below is a description of the development of MOOCs at different stages:

Experimental beginnings (2008-2011): In this early stage, MOOCs emerged as innovative experiments in the realm of online education. The courses focused on specific topics and were offered by renowned academic institutions. MOOCs were characterized by their focus on connectivity and active student participation through online tools.

Expansion and consolidation (2012-2013): During this period, interest in MOOCs grew rapidly, and online learning platforms began to offer a wide range of courses in various disciplines. Educational institutions jumped on the bandwagon and collaborated with the platforms to deliver quality educational content. Efforts were made to improve the structure and interactivity of the courses, and assessment and feedback tools for students were implemented.

Diversification and specialization (2014-2016): At this stage, MOOCs diversified into different types and approaches. In addition to traditional instructor-based MOOCs, peer-based MOOCs have emerged, where students collaborate with and assess each other. Specialized MOOCs were also developed in areas such as data science, programming, business skills, and more. Gamification strategies were introduced and social interaction among students was promoted.

Orientation towards employability and certification (2017-2019): As MOOCs became established as a valid form of online learning, the relationship between MOOCs and employability was emphasized. Skill-oriented training programs were developed and partnerships with businesses and employers established. In addition, certification options were introduced and sustainable business models were explored, such as offering paid courses or the option to obtain academic credits.

Integration of emerging technologies and personalization (2020 onwards): In this most recent stage, MOOCs have begun to take advantage of emerging technologies, such as artificial intelligence, adaptive learning and virtual reality, to improve the learning experience and personalization Of content. Data analysis tools have been implemented to better understand student behavior and provide personalized recommendations. Additionally, hybrid approaches combining online learning with face-to-face activities have been explored.

In short, the development of MOOCs has gone through different stages, from their experimental beginnings to their consolidation as a recognized online learning option. As MOOCs have evolved, emphasis has been placed on course diversification, employability, certification, and the integration of emerging technologies. MOOCs continue to evolve to meet the changing needs of students and the demands of the job market.

Classification of MOOC types

MOOCs (Massive Open Online Courses) can be classified into different types according to various criteria. Here are some common classifications:

Instructor-based vs. pair-based:

Instructor-based MOOCs: These are the more traditional courses, where an expert or instructor guides the course, provides the content, establishes the activities, and evaluates the progress of the students.

Peer-Based MOOCs: In these courses, students participate actively and collaboratively. The creation of learning communities in which students evaluate each other, share knowledge and feedback is encouraged.

Content based vs. skill based:

Content-Based MOOCs: These courses focus on delivering quality educational content in the form of videos, readings, exercises, and assessments. The main objective is to provide knowledge and theoretical concepts in a certain area of study.

Skill-Based MOOCs: These courses are designed to develop practical and applicable skills. They focus on practical activities, exercises, and projects that allow students to acquire specific skills, such as programming, graphic design, data analysis, among others.

closed vs. open:

Closed MOOCs: These courses have set start and end dates and follow a specific time structure. Students must sign up at the right time and keep up with the other participants.

Open MOOCs: These courses allow continuous access to content online, without time restrictions. Students can join and access the course at any time, learn at their own pace, and complete modules at their convenience.

academics vs. professionals:

Academic MOOCs: These courses are offered by educational institutions and focus on traditional academic content, such as science, humanities, engineering, among others. They are designed to complement formal education or broaden knowledge in a specific discipline.

Professional MOOCs: These courses are geared towards practical skills and knowledge that are relevant to the workplace. They can be designed in collaboration with companies or industry experts and focus on developing specific skills required in the labor market.

It is important to note that these types of MOOCs are not mutually exclusive and that many courses may combine features of various classifications. The classification of MOOCs can vary depending on the approaches and criteria used, but these categories provide an overview of the different characteristics and approaches that exist in MOOCs.

The cMOOC

The cMOOC, also known as connectivist MOOC (Connectivist Massive Open Online Course, in English), is a type of MOOC that differs from traditional MOOCs in its pedagogical approach and learning methodology.

The cMOOC is based on the theory of connectivism, which holds that learning occurs through interaction and connection with other individuals, resources and digital environments. Unlike instructor-based MOOCs, which follow an instructor-centric and hierarchical structure, cMOOCs focus on networking and collaboration among participants.

In a cMOOC, participants have an active role in building their own knowledge. The emphasis is on creating connections and participating in online learning communities. Participants share ideas, resources, and experiences through blogs, forums, social networks, and other online communication tools. Learning occurs in a distributed manner, as each participant brings their experience and knowledge to the group.

cMOOCs tend to be more open and flexible in terms of structure and content. They do not follow a linear and predefined sequence of activities, but participants are free to explore different topics and resources according to their interests and needs. Participants can create and share their own content, collaborate on projects, and network with experts and people with similar interests.

The cMOOC's approach is focused on social learning and the collective construction of knowledge. Active participation, critical reflection and dialogue among participants are promoted. The cMOOC facilitators have the role of guides and animators of the community, stimulating interaction and fostering the exchange of knowledge.

The cMOOC has been used in various disciplines and educational contexts. Its connectivity, collaboration and flexibility characteristics make it an alternative and disruptive model that adapts to the learning needs of the 21st century. Although cMOOCs can present challenges in terms of organization and management, they offer significant opportunities for autonomous learning, networking, and exploring new educational approaches.

The xMOOC

The xMOOC, also known as a structured MOOC (eXtended Massive Open Online Course, in English), is another type of MOOC that differs from the cMOOC in its pedagogical approach and learning methodology.

Unlike the cMOOC, which focuses on connectivist learning and active student engagement, the xMOOC is more like a traditional online course, with a predefined structure and sequence of content and activities.

The xMOOC is designed to be accessible to a large number of online participants and is characterized by the following features:

Structured content: xMOOCs follow an organized structure, with modules or lessons presented in a specific order. The content is usually made up of videos, readings, quizzes and assessments.

Automated assessment: xMOOCs often use automated assessment systems, such as multiple-choice quizzes or practice exercises, to rate student performance. This allows for immediate feedback and the ability to progress through the course at your own pace.

Focus on the transmission of knowledge: Unlike the cMOOC, which focuses on the collaborative construction of knowledge, the xMOOC focuses mainly on the transmission of knowledge by the instructors. Students follow the content provided and complete activities to reinforce their understanding.

Certification and accreditation: Many xMOOCs offer the option of earning a certificate or academic credit upon successful completion of the course. This has led to collaboration between educational institutions and MOOC platforms, providing formal learning opportunities and recognition for participants.

Scalability: xMOOCs are designed to serve large numbers of online learners. MOOC platforms allow for mass enrollment and offer a technical infrastructure that can support the load of course participants.

The xMOOC has been used by many universities and educational organizations to offer online courses to a global audience. Although it differs from the more collaborative and connectivist approach of the cMOOC, the xMOOC has proven to be an effective way to reach a broad spectrum of learners and provide access to education on a large scale.

It is important to note that the distinction between cMOOC and xMOOC is not strict, and some courses may combine elements of both approaches. In addition, the continuous evolution of MOOCs has led to the emergence of other models and approaches that are tailored to the specific needs and objectives of students and educational institutions.

The tMOOC

The term "tMOOC" is not as commonly used as "cMOOC" and "xMOOC". However, if we refer to the "tMOOC" as a third type of MOOC, we could consider it as the "thematic MOOC" or "MOOC focused on a specific topic".

Unlike cMOOCs and xMOOCs, which can cover a wide range of topics and disciplines, the tMOOC focuses on a particular topic or discipline. This type of MOOC is designed to provide more specialized and in-depth learning in a certain area.

The tMOOC generally follows a predefined content structure and sequence, similar to the xMOOC. Teaching materials, readings, activities, and assessments focus on the specific topic of the course. Instructors or experts in the field provide the content and guide participants through the learning process.

The tMOOC can be offered by universities, educational institutions, organizations or experts in the field. These thematic courses often attract students who have a particular interest in the subject and want to deepen their knowledge and skills in that specific area.

Like other types of MOOCs, the tMOOC can be made free and open, allowing access to a wide audience online. There may also be certification or accreditation options for those participants who wish to obtain formal recognition of their learning.

It is important to note that the term "tMOOC" may not be widely used or recognized in the academic literature or in the educational community. However, the idea of a thematic or topic-focused MOOC is a possible variant within the field of MOOCs and can be adapted and developed in different ways depending on learning needs and objectives.

Reactions and criticisms of the MOOC educational model

The MOOC educational model has generated various reactions and criticisms since its inception. Here are some of the most common reactions and criticisms:

Access and democratization: One of the main positive reactions towards MOOCs is their ability to provide access to education to a large number of people around the world. This has been especially valued in regions with limited access to traditional education. MOOCs have been considered as a tool to democratize learning and provide educational opportunities to those who otherwise would not be able to access them.

Flexibility and autonomous learning: MOOCs allow students to learn at their own pace and adapt their learning

process to their individual needs and schedules. The flexibility of the model has been praised, since participants can access the materials at any time and place, which facilitates autonomous learning.

Diversity of content: MOOCs cover a wide range of topics and disciplines, which has been well received by those looking to broaden their knowledge in specific areas or explore new fields of study. The diversity of content available in MOOCs allows students to choose courses that suit their interests and needs.

Interaction and feedback limitations: A common criticism of MOOCs is the lack of personalized interaction and feedback between instructors and students due to the large number of participants. This limitation can hinder the deepening of the concepts and the resolution of specific doubts. Some students have expressed a need for more interaction and support from instructors.

Completion Rate and Engagement: MOOCs often have low completion rates, which has led to criticism of the ability of participants to stay engaged and motivated throughout the course. The lack of structure and the absence of formal academic consequences can influence the lack of commitment and the difficulty in completing the courses.

Academic rigor and quality: Some critics have raised concerns about the academic rigor and quality of MOOCs. Since MOOCs are offered by a wide range of institutions and organizations, the quality and level of depth can vary significantly. Some argue that MOOCs may lack the same quality as face-to-face courses offered by established educational institutions.

It is important to note that these reactions and criticisms are not uniform and may vary depending on the perspective of the different stakeholders involved, such as students, instructors, educational institutions, and education experts. Furthermore, the MOOC educational model has evolved over time, and many of these criticisms have been recognized and addressed by MOOC providers to improve the learning experience.

CONCLUSIONS

The most important conclusions about the MOOC as an alternative model for university education are the following:

Broad Access: MOOCs have proven to be a powerful tool to broaden access to higher education, allowing people around the world the opportunity to access courses taught by renowned institutions.

Flexibility and autonomous learning: The MOOC model offers flexibility in terms of schedules and location, allowing students to learn at their own pace and adapt learning to their individual needs. This promotes autonomous learning and self-regulation.

Diversity of content: MOOCs cover a wide range of topics and disciplines, giving students the opportunity to explore various fields of study and gain knowledge in areas of their specific interest.

Continuous updating and learning: MOOCs allow students to stay current in their professional fields and acquire new skills and knowledge relevant to the constantly evolving job market.

Collaboration and Networking: MOOCs often encourage interaction and collaboration between students through discussion forums and online group activities, providing the opportunity to network and build connections with like-minded people around the world.

Completion and motivation challenges: Despite their benefits, MOOCs also face challenges in terms of completion rates and student motivation. The lack of formal academic consequences and the absence of structure can make it difficult for some students to commit to and complete courses.

Quality and credibility: There is variability in the quality and credibility of MOOCs, since they are offered by a wide range of institutions and organizations. It is important to carefully assess the reputation and academic rigor of MOOC providers before enrolling in a course.

Finally, the MOOC as an alternative model for university education has proven to be a valuable tool to broaden access to education, encourage autonomous learning and provide continuous learning opportunities. However, it also presents challenges in terms of completion and motivation, as well as ensuring the quality and credibility of the courses offered.

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