

# A Teaching Perspective of the Democratization of Knowledge on Open Educational Resources (OER) for MOOCs in México

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## Abstract

*This research aims to explore the teachers' perspective from the Autonomous University of Yucatán, México (known as UADY in Spanish) about the Democratization of Knowledge on the Open Educational Resources (OER), especially on adapting the existing instructional models to be designed as Massive Open Online Courses (MOOC). This study was conducted under the qualitative approaches part of the elective course 'Designing and Developing OERs' using the case study research method. Triangulation of the participants' perspectives, teacher and students, was done to ensure reliability and validity.*

**Key Words:** Open Educational Resources; Democratization of Knowledge; Training Educators; Instructional Models; Massive Open Online Courses; Educational Innovation

## 1. Introduction

The technological paradigm has ruled the actions taken in training educators in such a way that, even though it represents a progress in developing resources for learning there is an excessive emphasis on technological aids sidesteps, nevertheless what is fundamental is pedagogical innovations for the processes of learning and teaching. Thus, over the past few years, the academic community of the School of Education of the Autonomous University of Yucatán, embarked on the task of innovating in this scope, making inroads into new communication paradigms applied to education, as well as innovating contents and ways to spur learning.

Then, in accordance to the scientific and technological developments explaining the changing society to which Bauman (2010) refers, to advance in the generation of knowledge along with such society within the possibilities of mass education is necessary. As claimed by Méndez, Hernández y May (2010) in their chapter '*Los medios y la interacción en la enseñanza*' (Media and Interaction in Education), innovating education and its pedagogy, rather than technology, is fundamental.

In this respect, as a joint action to innovate the curriculum, especially the elective courses, it was considered important to have the opportunity to enhance the academic training of the students from the degree in Education on the democratization of knowledge, ITC management and the introduction to OER under a pedagogical innovative approach, in order to have the chance to teach them and learn in the new educational scenarios.

### 1.1 ICT and OER in Training Educators.

Human relations in the realm of education, from the point of view of the emergence of individual and collective constructivist criticism, lead to understanding the communicative models as an opportunity to democratize knowledge. Then, democratization means community, and knowledge becomes that way when teaching and learning are transcendental for the *demos*. What has been said implies that the ICTs in open courses and OERs offer the possibility to empower mankind.

In this regard, the OERs, seen as open-license, editable, reusable digital materials for educators, trainee teachers and autonomous learners, represent an opportunity for the virtual classroom experience innovation. As quoted by UNESCO (2012), an OER is a public-domain educational material with an open license which can also be used in research. What is more, free adaptation, modification and distribution are allowed. Currently, alongside OERs, Massive Open Online Courses (MOOC) can also be found. Such courses are developed to offer distance education to cover a wide audience of professionals around the world (Mackness, et. al., 2013). These courses allow for a plural and collective participation ensuring equal access to knowledge.

Besides, OERs and MOOCs can be used by educators and trainees as new ways to teach and learn. Innovation here relies on building novel learning experiences and collective knowledge, creating a space for different agreements regarding planning, designing and implementing strategies for teaching in web scenarios. Thus, MOOCs and OERs are an opportunity to achieve open access to knowledge in a culture of sharing and reutilization of such resources. It is worth noting that these OERs are created by the academic community itself: teachers and students (Gaser, 2012), where university educators will open their way and have an impact on the field by generating research to address the existing and emerging gap of knowledge between the culture of the OER and the MOOC.

## **2. Research Problem: A Teaching Perspective of the Democratization of Knowledge on Open Educational Resources (OER) for MOOCs.**

In the School of Education of the Autonomous University of Yucatan, multiple actions to innovate the curriculum of the degree in Education have been taken. Especial emphasis has been made on new educational paradigms moving towards the technological realm of the digital media and resources to enhance the teaching and learning process, as mentioned before. Nonetheless, the transformation of postmodern society and the paradigms posed by the liquid modernity make democratization of knowledge something necessary inside of the society, the university itself, the school and its curricula. Therefore, the study of the teaching perspective, ideas and conceptions about the democratization of knowledge when working with OERs for MOOCs, it is vital to understand, enrich and guide the practices of teaching and learning in these new scenarios according to the current educational needs.

### **2.1. Purpose and Objectives**

The purpose of this research is to understand the teaching perspective on the democratization of knowledge about the Open Educational Resources for MOOCs. (OER) for MOOCs’.

The objectives are as follows:

1. To analyze the teaching perspective of the Democratization of Knowledge on Open Educational Resources (OER) for MOOCs

### **3. Literature Review**

#### **3.1. *The Open Educational Resources (OER)***

The Open Educational Resources as alternative tools to build and disseminate knowledge more efficiently have emerged with the support of important international organisms such as the United Nations for Education, Sciences and Culture Organization (UNESCO) and the Organization for Economic Cooperation and Development (OECD). These organizations have supported and built efforts to develop and share this concept throughout the world.

On one side, the OER have three main characteristics: a) educating through content, b) presentation tools, and c) resources for implementation. Considering these allows for advantages which will empower flexibility, equity, the expansion of resources, learning experiences, the organization of education, and broader generation of information and knowledge serving the society (Hernández et al, 2013).

On the other side, designing and developing OERs for MOOCs will depend in a wide extent on the learning objectives, the instructor's computer system management skills and his or her creativity for its design and development. It is important to highlight that the development of the OERs is, to a great extent, due to the improvements in free and open access computer programs, i.e. software for which a license is not required. According to ideas already mentioned, designing and developing OERs for MOOCs implies a joint action between the efforts made to democratize knowledge and the actions taken by educators and trainees to create them based on their technical and technological design and development to enhance the democratization of knowledge and achieve the educational goal. Finally, it is worth considering that the OER is an essential component for an open access course. The instructional design and its stages must be considered in the design of the OERs since they serve as a guide for us to create educational materials that may contribute to the achievement of the learning objectives.

#### **3.2. OER's Instructional Design for MOOCs**

A brief description of the adaptation made to the stages of instructional design of OERs for MOOCs is featured below: 1. Needs Analysis, 2. Design, 3. Implementation and 4. Evaluation (Table 1). These stages guide the design and development of the resources and the course.

Table 1. Adaptation of the instructional design stages of OERs for MOOCs (original idea by Méndez, May & Hernández).

<b>Needs Analysis</b>	<b>Design</b>	<b>Implementation</b>	<b>Evaluation</b>
<p>The realities of the setting where the project will be carried out are evaluated. This will detect existing issues on the different virtual scenarios to take into consideration when designing and preparing the program, the educational resources and the assessment techniques of the course. Every single design, including OERs' or MOOCs', starts with a need, which is rather the discrepancy between the current state and the intended (Stufflebeam, et al., 1984).</p>	<p>When designing an OER for a course, considering its own characteristics is crucial; they are open, modifiable, compatible, and common to all the participants through ontologies (Gaser, 2012). In this line, this part of the design is done by the one in charge of creating the items and materials on the virtual environment. Innovation means that the design is framed in an instructional design which has analyzed from what the learning objective is and the resource that must be designed to the procedures to obtain the best result.</p>	<p>In this stage, it is important to include the own characteristics of MOOCs. Based on such, the support units should be developed by establishing a suitable plan for the implementation of the course in the desired virtual environments (Silas, 2007; Gaser, 2012).</p>	<p>Silas (2007) mentions that, due to the origins of the OERs and MOOCs, evaluation must measure aspects such as the utility of the resource, its accessibility, the environment of modification, issues that have arisen when accessing the Learning Management Systems, if it has a user-friendly environment, the relevance of the resource, if it is easy to reuse, the cognitive levels that can be reached, and the effectiveness to attain the instructional objectives through the achievement of the learning goals.</p>

**4. Methodology**

This study was conducted under the qualitative approach as an overview of the existing realities, which offers the opportunity to cover situations and phenomena where human actions occur in the daily life recovering the subjects' intersubjectivity. In this sense, Galindo (1998) and Pérez (2008) explains that, from a hermeneutic and symbolic-interpretative view, the educational effort must be understood under these methodological possibilities which allow for a deep understanding of the what, how, why and what for, as a throughout reflection on the practicum. The case of this research is of our concern for its novelty in entering the field of educational technology and, especially, the democratization of knowledge in this changing word, which is a reality occurring within the educational realm with the OER regarding the training of the Bachelors of Education. This is a unique phenomenon due to its innovation, approach, and to

the interactions that unfold from this when building the learning experiences in the free environments of distance education.

The research method was a case study because the phenomenon "It is especially interesting in itself. We look for the detail of the interaction with their contexts. The case study research of particularity and complexity of a particular case, to get to understand their activity in important circumstances" (Stake, 2007 p.11).

In this sense it is of special interest to understand the ideas and concepts of the educator regarding the democratization of knowledge by working technologies in new teaching scenarios: OERs for MOOCs. This research is particularly useful for researchers, as it delved into the detail of the meanings that teachers possess the novelty and originality of the phenomenon at the university where the study was conducted. The case study is well defined and refers to the ideas and meanings of teachers regarding the democratization of knowledge. It also has not been addressed in this context.

The group of participants included 1 teacher and 31 students, from the first and third semester of the degree in Education (*LE* in Spanish). The researcher will use the participant observation methodology by taking the role of administrator of the course's virtual scenario and platform; maintaining a close, sustained, personal contact with the participant teacher and students (Stake, 2007; Pérez, 2007).

The research techniques used for data collection were: a) in-depth qualitative interview which addresses the reality of the interviewee (Sierra, 1988). Based on that, an in-depth interview with the professor Mario, teacher in the course "Designing and Developing OERs", was held. This interview explores the teacher's experience in training Education students on the democratization of knowledge through the OERs for MOOCs. b) A focus group where the group of students' perspective of their experience in the training process as well as their appreciation of the resulting interactions were examined in depth. And c) the analysis of documents such as the course description document and the students' products, since they are part of the personal documents for research (Pérez, 2007).

Reliability and validity can be achieved by objectifying subjects through the contrast and complement technique, which can be seen in the triangulation embodied in the data records (Berger & Luckman, 1968; Stake, 2007) mentioned before.

## **5. Discussion of Results**

To continue is present the discussion of the results in topic after to qualitative analyze.

### ***5.1. Academic Preparation and Global Trends in Knowledge Democratization***

According to the teacher Mario, the global trends, in response to the demand for mass training and the intention to boost democracy under the principle that we can be freedom, if we have a knowledge, mass education, and the emerging chance for online education are the guidelines to follow as means of building democratic societies. Based on the research carried out, the idea of innovating trainees' formative process under an educational-communicative perspective of the OERs and MOOCs arises.

The constant here is the mass opportunity to achieve knowledge. In this regard, the teacher claimed:

...part of the idea started because I am part of a research network among many national universities which were experimenting with OERs and MOOCs... [...] ...I analyzed the chances to create a subject, to work with OERs as a strategy...

...conceptualization of open courses aided with these types of resources, as well as the global experiences gained in different universities and educational institutions...

The aforementioned coincides with Butcher's ideas (2015: 5): the concept of mass and online education has a strong potential to support educational transformation. Using such resources as an integral communication method for teaching makes curricula and courses available to a wide audience of students. This is its educational value.

### ***5.2. A Concept of Democratization of Knowledge***

One of the key concepts which UNESCO (2012) has promoted is democratization of knowledge alongside with the right for internet access and good connectivity. In this sense, the MOOC held via internet at least addresses the concept of the democratization of knowledge. Unfortunately, secure and timely access to the global network is actually limited in a great number of cities, towns and villages inside Mexico. Regarding this, Mackness, et al. (2013) mention that MOOCs are developed to offer distance education in a way that it reaches a wide audience of professionals around the world.

On the other hand, and as part of the cultural heritage from the post-revolutionary era, democracy in education has moved promoting free access, which is also supported by OERs and MOOCs. In addition, it is stated that inclusion refers to the personalization of the materials and the teaching experience according to the idea of Bauman's liquid modernity (2010).

What has been said before can be clearly identified in the statement from the teacher:

...the main requirement is that every single material can be tailored to meet the user's needs. This paradigm-related change enables the Education students to explore different fields of study, work, research and development. What is more, it enables the creation of a democratic and inclusive education since another characteristic of open courses is the fact that they are free or low-cost. Hence, access to education at all almost levels is a reality for everyone...

...It is noteworthy to say that, as part of the current concepts of democracy and democratization of knowledge, it is also mentioned that this low-cost will help provide "education for all"...

### ***5.3. Paradigm Changes in Democratization***

Online education is shaping the conventional physical classroom into a virtual scenario. This is due to the fact that, as part of the tradition in liberalism, the self-governing capacity seen as democracy, and the adoption of this ideas in Mexico, the concept "education for all" guaranteed in the Article 3 of the Constitution and the expansion of compulsory education until high school are currently changing due to the society of information and knowledge. The purpose is to carry not only education, but also freedom to every corner. Now knowledge can be owned, applied and obtained via internet through online and distance courses. These guarantees also offer personalization according to the needs of each society and student.



What has been stated in the previous paragraph agrees with Hernandez, et al (2013). These authors mention that using online resources brings educational advantages and allows for greater flexibility, equity, expansion, learning experiences, organization of education, etc. because these are sources serving society and encourage a greater production of knowledge.

Regarding these ideas, the teacher declared:

...a paradigm change: in traditional courses, the student is expected to register and attend the sessions. In online courses, they register, get an access code, download materials and these cannot be modified depending on the characteristics of the region, group, culture or economic situation. On the contrary, the main requirement in an open OER-based course is that every single material can be tailored to the needs of the user. This paradigm change enables the Education student to explore other fields of study, work, research and development, as well as to build a democratic and inclusive education...

#### ***5.4. Democratization of Knowledge through OERs and MOOCs as part of an Inclusive Education***

Democracy comes from Greek demos 'the people' and -kratia 'power, rule' which means "popular government". As explained before, the Mexican Constitution promotes free education as a right. Nonetheless, education is currently seen not only as a right but also a service. Hence, it should be acquired depending on the market's economic situation. In this respect, education is still a privilege for some people. Then, open access to information and to all educational levels through MOOCs and OERs may be the solution. However, certification is a remaining problem since it represents a cost. Thus, it implies neglecting the validity of the efforts made by poor citizens to be better prepared. "Definitely, MOOCs grant universal access to high quality education" (SCOPEO, 2013 p.35), but the certification issue refers to the lack of universities that could sponsor the courses and the assessment of the student's knowledge and skills gained (SCOPEO, 2013). In other words, students need to pay for certifying course accomplishment.

As declared by the teacher:

...democratization of knowledge is an idea that, even since the Enlightenment, French philosophers conceptualized as part of a whole system to establish a republic based on human rights. This idea has filtered to any country adopting democracy as their system of government. However, it is not a living reality in our country yet. To this day, although the right to education is written on the Constitution, students are still required to take an admission exam to enter university. This issue transforms education into a privilege rather than a right. And these new massive open online courses provide access to all educational levels, not only university. In my opinion, this emerging movement of democratizing education using MOOCs and OERs is one solution to millions of students failing to enter university every year, not because they are unintelligent, but due to the lack of spaces in public universities and the high costs of private education. This problem prevents them from receiving education...

#### ***5.5. Challenges, Difficulties and Potential in the Democratization of Knowledge***

Regarding the challenges and difficulties of democratizing knowledge, economic, political and cultural issues arise in Mexico. Despite the educational reforms, there is still a notorious gap between social classes.

For example, the division between the people who have less and the ones who rule the big companies in the market. In countries with an emerging economy like Mexico, which were previously considered as developing, efforts to reduce educational lagging have been made, such as the implementation of MOOCs and OERs. Nevertheless, these efforts have been misused to preserve and perpetuate the market system. As Freire (2005) states, the dominant class would not be naïve so as to offer educational programs and curricula that promote critical consciousness and liberating action.

On the other hand, the challenge of working collaboratively using MOOCs and OERs, and facing new teaching and learning styles are some of the aspects that still need to be dealt with. Moving and editing existing materials and courses to these kinds of platforms is not enough. The development and improvement of new materials in the new virtual scenarios is a must. Building new competencies on our teachers and students as a joint construction of knowledge by means of changing teaching and learning situations is necessary (Méndez, Quiñonez & Canto, 2016).

According to the teacher's opinion:

...The challenges and difficulties of democratizing education come from the educational policy. Even when the federal government is making real progress, connectivity and internet access are the main drawback, as well as access to technologies...

...Cultural diversity, too. We cannot talk about democratizing education if we do not address cultural diversity as a whole. Other challenges are cutting down poverty. In our country, where money is owned by an elitist group, and which is the hometown of the richest man in the world, there is still a vast majority of poor people. We cannot talk about democratization if poverty is not reduced. Thus, the OERs can establish a bridge between society and knowledge. The challenge is trying to link culture, poverty reduction and inclusive education...

## **6. As a conclusion**

The OERs and MOOCs are an attempt to encourage democratization of knowledge through education. Dealing with the educational demand in emergent economy countries with political, economic, cultural and social issues is intended. They are part of the solution proposed by some educators in a sincere effort to provide tools and spaces to make better personal and professional growth opportunities available to any person. Moreover, OERs, which are key elements for this type of courses, enable specific interactions that would allow for personalization of students' learning process and educators' teaching style.

To conclude, democratizing knowledge through MOOCs and OERs is a need due to the new trends in mass education. Furthermore, such tools are an impulse that contributes to students' academic preparation at all educational levels. This impulse does not compete with rather complements the development of a person's knowledge under the educational-communicative paradigm.

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