

## Mooc School for Workers (MSW): a partnership between Public University and the Federal Government in Brazil

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**Abstract.** This article presents the "Mooc School for Workers" as a research project resulting from the partnership between the University of Brasília and the Federal Government in Brazil. The Worker's School aims to offer MOOC-type qualification courses, both nationally and internationally, using Information and Communication Technologies. The objective of this article is to present how the partnerships between university institutions, research institutions and government can employ MOOC as a social technology to encourage citizen participation in online courses. The preliminary results indicate that the project can be considered as an answer to part of the unemployment problems in Brazil. The School for Workers portal has been accessed by a contingent of the Brazilian population of low qualification, distributed in all Brazilian regions. In the long term, the platform could have the potential to broaden partnerships and promote human capital increase and democratization of access to knowledge by subsidizing the formulation of public policies.

**Keywords:** Qualification. School for Workers. E-learning. MOOC.

### 1 Introduction

The transformations in contemporaneity impelled, disruptively, by the advance of technologies, have drawn a scenario of constant changes also in the world of work, giving rise to new occupations, transforming or extinguishing traditional professions. In addition, the rapid and frequent economic changes faced by society result in changes in the relationship between work and career, requiring constant adaptation of the worker [1], [2]. Changes in the nature of professions, in response to social demands, create gaps in knowledge and skills, requiring updating and / or professional qualification.

Unemployment is a challenge for developed and developing countries, necessarily involving specific and culturally relevant investments and policies. Investment policies should address the needs of the labor force and the labor market, for example, investments in raising human capital and professional qualification. According to the Global Human Capital report, the most important thing in the knowledge society is how nations will develop the human capital of their long-term success than virtually any

other factor. "By human capital we mean the knowledge and skills people possess that enable them to create value in the global economic system. Human capital is not only defined through formal education and skilling" [3, p.5].

Among the solutions found by the Brazilian government, in 2017, the creation of a Virtual School for the Workers is highlighted. The Worker's School is intended to offer MOOC-type qualification courses, both nationally and internationally, using Information and Communication Technologies (ICT). To draw the focus of their courses, critically, some assumptions were adopted. First, it should be World Declaration on Higher Education for the 21st Century oriented understanding the project as lifelong learning: the emphasis on learning to undertake, developing a spirit of initiative, social responsibility, active participation and ability to promote change for equal rights and justice and not just in qualification courses. Second, the diploma does not mean an employment guarantee [4]. Drucker (1997), mentioned by [4], states that the main social groups of the knowledge society will be knowledge workers, people capable of allocating knowledge to increase productivity and generate innovation. Third, to adopt the term development of human capital not as a fixed factor or categories of workers, but as an action that strengthens "knowledge and skills they possess that enable them to create value in the global economic system. This requires investment both on the side of individuals and by public and private stakeholders across people's lifetimes" [3, p.5]. The project is part of a set of governmental actions that aims to answer some of the issues of unemployment in Brazil in Brazil, because it would be very difficult to directly influence unemployment rates by certification. Otherwise, in the long term, it might become a strategy to increase human capital rates.

The objective of this article is to present how the partnerships between university institutions, research institutions and the government can appropriate the MOOCs as social technology to favor professional qualification with democratization of knowledge. Therefore, the results of the first year of implementation of the School of Work and the pedagogical requirements adopted in the design of the MOOC are presented.

### **1.1 Implementation of the Mooc School for Workers**

The University of Brasilia (UnB) was created in 1961 and today it has approximately 46 thousand students, with more than 120 undergraduate courses and 154 undergraduate and doctoral courses, with four university campuses in the surroundings of Brasilia. At the University of Brasilia, the Mooc School for Workers program was conceived as a Research Project approved by the Dean of Innovation and Research. The university already had a wide experience in offering courses for large audiences.

In order to implement the Mooc School for Workers it was necessary to organize a team of research professors from various areas of knowledge, including Psychology, Education, Telecommunication, Information Technology, Visual Arts and Public Management. This program was developed with the participation of scholarship students in undergraduate and postgraduate courses, in order to generate internal training. The Project team was organized into subgroups to cover all actions that include: design and construction of the MOOC courses, customization of the platform,

studies and surveys to map the demands of worker qualification, platform monitoring, cross-platform data connected with the data banks of the Brazilian labor market (RAIS, CAGED and Seguro Unemployment). This article focuses only on the actions of the subgroup responsible for the design and construction of the MOOC courses.

Being a project of great magnitude and social impact, it was fundamental to establish partnerships with research institutions, such as: Brazilian Institute of Information in Science and Technology (IBICT), the National Network of Teaching and Research (RNP) and the Foundation for Scientific and Technological Enterprises (FINATEC).

The Mocc School for Workers portal is available at <<https://www.escoladotrabalhador.gov.br/>>. The 26 courses, currently offered in Portuguese, are distributed in twelve thematic axes, according to the Guide of Courses of Initial and Continuing Education (FIC) of the Brazilian Ministry of Education, which is related to the Brazilian Classification of Occupations CBO).

## **2 Development: pedagogical proposal of the MOOC courses of the Worker's School**

One of the challenges of the Mocc School for Workers is to define and design courses that may offer opportunities for building knowledge and improvement to a heterogeneous public, nationally or internationally, with the restriction that the courses were produced in Portuguese. To ensure the accessibility and quality of the offerings, the pedagogical project was based on the methodology of e-learning in the MOOC mode using the LMS Moodle, customized to meet the target audience.

MOOCs have a disruptive effect on teaching, breaking away from the classic way of teaching and learning, favoring innovative learning experiences with the potential to motivate participation and social inclusion [5]. However, they also encounter risks in the educational process when the courses offer poor design and break with scalability and motivation [5]. Some authors [6] argue that the quality of the teaching and learning process is always the condition that determines learning effectiveness and success in studies (conclusion).

The pedagogical proposal of the School of Worker has appropriated the following elements to design the MOOC courses: open courses, with no start and finish dates; increasing use of multimedia materials to support different learning styles; automated qualified feedback for each item of evaluative questions; use of the Matrix of Profile and Skills of the students by courses and, finally, free certification by the University.

The Mocc School for Workers is based on the democratization of access to knowledge and on pedagogical principles that value studies in an autonomous way. In this way, enrollment is permanently open, allowing at any time the person can enroll and start the course. There is no time limit for the term. The courses are self-paced, with instant and immediate responses and do not require interaction with tutors. The format adopted is highly flexible and favors the best management of the time and place of study.

The target public of the Mocc School for Workers project is defined by the Resolution of the Fund for the Support of Workers (CODEFAT) [7], namely:

beneficiaries of unemployment insurance; unemployed workers registered in the SINE database; workers employed in occupations affected by processes of technological modernization and productive restructuring; and beneficiaries of social inclusion policies. They are workers with different profiles of schooling, profession, age, home region, etc. Therefore, the design of online courses at the School of Worker values and respects socio-cultural diversity, gender, race and culture. The courses of the School enroll approximately 50% of workers in the labor market, for whom the courses are opportunities for professional improvement, and 50% for unemployed persons.

This has led to another specificity in the design of MOOC courses for Worker's Education: courses should develop the skills and abilities to meet the demands of the job market. Finally, another specificity was to consider the diversity of knowledge brought by those interested in the School programs, that is, lay knowledge, traditional popular, scientific and different levels of knowledge and use of technologies. This clarity regarding the objectives of the MOOC courses and the public profile desired by the Worker's School Project were fundamental for the customization of the virtual platform and the development of various resources and didactic materials. However, it is worth mentioning that as the courses are free, with certification given by the University of Brasília, they attract a diversity of other users with higher education, master and doctoral degrees, going far beyond the expectations of the Project.

In the literature review [8], surveys indicate an increase in the popularity of MOOCs [9], but in most courses, completion rates are low (around 10%). The School of Worker, as an instrument of social inclusion and improvement of professional qualification, presents higher rates that vary between courses in the range of 11 to 27% of graduates. It is believed that the motivation lies in obtaining the certificate of a university that is recognized nationally and internationally that may have positive effects at the time of a professional interview and may also serve to the improvement of the curriculum.

To motivate the students, designers and pedagogues have developed didactic materials that include dynamic and interactive resources such as gamification, virtual learning objects, contextualized items with intelligent feedbacks, and integration of other media such as videos, animations, comics and infographics. The courses have no mediation of tutors.

### **3 Results of the MOOC School for Works in numbers**

In the first year of implementation, November 21, 2017 to December 31, 2018, the MSW was accessed from all states of the Federation, including small cities. The mayor number of students come from the Southeast region of the country. In this period the MSW platform received 427,736 subscriptions; 680,438 enrollments by at least one of 26 courses available and had 115,368 certified students. Observe that one person may enroll more than one course. Table 1 shows the figures for the year 2017 and 2018, separately.

**Table 1.** Enrollments and number of students qualified by course at the School of Worker - November 21, 2017 to December 31, 2018.

Year	N° of Subscriptions (participants)	N° of Enrollments in different courses	N° of certified students
2017	83.841	125.239	--
2018	343.895	561.199	115.368
<b>total</b>	427.736	686.438	115.368

When analyzing who else accesses the MSW, there is a greater participation of females, 56.8% against 43.2% for males. This data confirms the Brazilian literature that indicate a greater number of women in the search for initial formation and continued distance [10].

Regarding the distribution of students of the MSW by age, the indexes indicate most enrolled students are in the range of 18 to 39 years. As for schooling, there is a distribution of incomplete primary education (1.4%), complete fundamental (1.6%), incomplete secondary education (6.6%) and complete secondary education (34.0%), followed by incomplete undergraduate (26.3%) and higher education degree (21.0%), post graduation specialists (6.6%), and master and doctorate degree (1.4%). International literature indicates that people seeking MOOCs already have college diplomas. The objective of these people would be the search for updating skills [11]. However, the data of the MSW regarding background educational that the students at moment of registration diverge from the international literature about MOOC. The data pointing out that most of the school's students have low qualifications and probably seek the courses to improve their skills and abilities and can increase the possibilities of obtaining a job.

As for the ten most wanted courses, among the 26 available courses, it is observed that they are directly related to the development of skills that can be approached in different professions. At present, careers are no longer linear, which means that professionals have made choices that favor adaptation to the new labor market, impacting on the contexts of their lives and the environments in which they are inserted [1], [2]. With the breakup of this linearity and with the worker's lesser attachment to the job, the professionals started to face transitions, that might be planned, unexpected or might even be "waiting to happen" [1], [12].

In addition to the courses offered, the Mooc School for Workers platform provides information based on business intelligence, referring to the cross-referencing of employment and labor market data, based on national databases of workers' status (CAGED, RAIS). The data are organized by indicators and can be consulted <<http://indicadores.escoladotrabalhador.gov.br/>>.

#### 4 Final considerations

This project capitalizes on the potential of the MOOC to democratize access to formal and continuing education, strengthening the workforce and bridging the gap for professional qualification.

The new patterns of organization of work and production demand new professional profiles and qualification of the workforce. The Mocc School for Workers courses are designed to meet flexible qualification proposals with a modern and pleasant design, integrating media and didactic resources in order to favor learning.

The preliminary results indicate the project can be considered as an answer to a part of the unemployment issues in Brazil. The MSW has been accessed by a contingent of the Brazilian population of low qualification, distributed in all Brazilian regions. In the long term, the platform has the potential to broaden partnerships and promote human capital increase and democratization of access to knowledge by subsidizing the formulation of public policies.

The reported case of the MSW indicates that the Brazilian government has been concerned with the formulation of public policies to improve employability and employment. The School of Worker is an initiative of the Brazilian government as the result of partnerships with research institutions. Among the challenges to be overcome, other time of the project is preparing a plan to assessing the impacts of the courses on improving the attainment of employment and employability in other ongoing studies.

Current results demonstrate that the optimization of resources and the aggregation of expertise from each partner, University, Research Institute and Government, can reverberate in the form of social organization and meeting social demands for qualification and increase of human capital in the medium and long term.

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