Short Communication

Creating a MOOC to develop information skills during the coronavirus pandemic

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1. Introduction

The global COVID-19 pandemic has demanded new strategies and, at the same time, granted new opportunities for the university regarding community engagement. Online education has become a challenge for all universities and libraries around the world. In this context, the Universidad Viña del Mar (Chile), articulating a collaboration between its library and the Department of Educational Technology, has worked on a MOOC for the development of informational skills, considering the possibilities of using these types of technologies to develop skills openly free of charge.

2. MOOCs and IL development

Massive Open Online Courses (MOOCs) can be classified in three ways: cMOOC, xMOOC, and a hybridized version of both. In the case of the cMOOC, the "c" corresponds to connectivity, so the emphasis is on creating interaction between the participants, generating learning based on the dialogue, interaction and exploration that participants develop among themselves. On the other hand, the xMOOCs are traditional but automated online courses which are developed over videos, videoconferences and standardized questionnaires, so the emphasis is not on networking, but on the transfer of knowledge from the teacher to student (Philippos et al., 2020).

All these types of MOOC are good tools to support the teaching of informational skills or information literacy (IL), especially in an environment that changes rapidly as a result of the speed of technological advances (Seufert et al., 2019).

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In the current technological environment, information skills are positioned as the literacy required to navigate and take advantage of the benefits of a digital society. This is reflected in statements such as that of the Council and the European Parliament, which establish a number of concepts associated with information literacy (IL) as key competences that citizens of the continent must continually learn, and the statements of the International Federation of Library Associations and Institutions (IFLA) together with UNESCO that establish information skills as key pieces for achieving a modern knowledge society (Dreisiebnerner, 2019).

Given the importance of information skills and their compatibility with MOOCs, their teaching in current times of COVID-19 pandemic could be favored by the need for digital transformation of education and the interest of people to take advantage of the time given to them by the period of confinement (Djeyaramane, 2020).

There are a lot of MOOCs on information skills, mostly of the xMOOC type, with a low level of interaction between students or gamified elements, which cover a wide variety of topics such as fake news, information skills for children, gender stereotypes, Google search engine extensions, research methods, Internet security, self-organization, among others, with durations ranging from 3 to 12 weeks with an average of 7 weeks (Dreisiebner, 2019).

3. Process for designing MOOCs for the development of information skills

3.1. MOOC planning and development

Initially, the library of Universidad Viña del Mar incorporated the use of technologies to promote informational skills development through the elaboration of explanatory videos and online training sessions, only considering the academic community of the university as audience. Following this line of work, the library has established a relationship with the Department of Educational Technology, which later has founded the basis to establish a collaborative work between both units for the application of instructional design and the creation of a Massive Open Online Course (MOOC) focused in informational skills development.

On the other hand, the context of the pandemic has promoted the digitization of educational processes, where libraries must reformulate their services. Therefore, the creation of a MOOC becomes a relevant initiative to promote the learning of information skills in the confinement during the global COVID-19 pandemic. This is how the project to design a course called "information skills development" arose and will be released in July 2020.

In the MOOC pre-development phase, through the creation of its respective syllabus, work was carried out on the definition of three relevant topics to be developed: 1) Search of information, 2) Selection and evaluation of information sources, 3) Ethical use and application of bibliographic styles.

Table 1
Types of software used for the production of instructional materials

Type of material	Type of software	Description
Class platform	Development with a Content Management System (Rise360 by Articulate Storyline)	Software that organizes the class content and distributes it into modules, presenting content to students.
Instructional videos	Screen recorder (Camtasia y Articulate	Software that allows screen recorder and the combination with a guided speech for video-tutorial design.
Animated videos	Digital animation design (Premiere y After effects)	Software that allows the development of animated videos that exposes content.
Infographics	Development with a content manager (Rise360 by Articulate Storyline)	Software that allows the development of explanatory and interactive infographics.
Assessment question-naires	Development with a content manager (Rise360 by Articulate Storyline)	To evaluate skills acquired in the classroom.

To achieve each topic, 3 respective modules were developed by the library and de Department of Educational Technology of the Universidad Viña del Mar with instructional videos, audiovisual and textual information, infographics and a short evaluation questionnaire. Figure 1 shows the interface of one of the modules.

Fig. 1. MOOC's first module – Information Search Strategies.

3.2. Development tools and procedures

In this phase, the structuring of the content becomes relevant, through the production of learning objects facilitated by communication between library experts and instructional designers. In this stage, collaboratively, the analysis, planning, design, development and assembly of the course is carried out.

Also, different types of software were used and integrated in the MOOC development process, including the use of content management systems, screen recorders and

animation design software. Table 1 categorizes and describes the use of each type of tool.

3.3. Future challenges

The future challenges of MOOC design focus on two fronts: on the one hand, the positioning of the course to obtain a significant number of interested students who can complete all the modules to finish the course and, on the other hand, the evaluation of the course to set their opportunities of improvement at the level of user interaction to encourage participation and continuity in learning (Fidalgo-Blanco, Sein-Echaluce & García Peñalvo, 2013). In this way, this course can be integrated with future modules to scale in its complexity according to the response and interaction of current students.

4. Conclusions

The confinement of the population resulting from the containment measures that governments have taken against COVID-19 has resulted in the educational field in a rebirth of MOOCs. In this vein, the Universidad Viña del Mar implemented an xMOOC focused on the teaching of information skills, specifically in 3 topics: 1) information seeking, 2) selection and evaluation of information sources and 3) ethical use and application of bibliographic rules.

The xMOOC has not been released yet but it will be published in July 2020 by the library and the Department of Educational Technology of Universidad Viña del Mar. Despite this, the challenges to be addressed in a future version are already clear, including reaching a greater number of participants, incorporating new sub-competencies and moving towards a hybrid MOOC that promotes and leverages learning derived from interaction between participants. Overcoming these challenges will strengthen the development of key information competencies in students for a modern knowledge society.

Acknowledgments

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