Teacher Education in the Emergency: a MOOC-Inspired Teacher Professional Development Strategy Grounded in Critical Digital Pedagogy and Pedagogy of Care

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SPECIAL COLLECTION: LEARNING FROM LOCKDOWN

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ABSTRACT

The Covid-19 pandemic started off a process that would drastically change the ways to teach and learn, deepening and accelerating the relationship between technologies and educational processes, reshaping the Higher Education scenario. The emergency challenged Universidad de la República, the main public university in Uruguay, which in turn designed and implemented Emergency Remote Teaching, that allowed the continuity of Higher Education, minimizing academic impacts. Within this frame of action, the Virtual Learning Environments Program elaborated a Contingency Plan for teaching and learning, with an approach that considered Pedagogy of Care and Critical Digital Pedagogy. One of the actions implemented was the Teacher Professional Development Course "Teaching Online in Emergency Conditions". This experience constitutes a Massive Online Open Course (MOOC) -inspired course in Udelar. The article describes this innovative experience in Teacher Professional Development, presents the theoretical basis and methodological approach, the process and main decisions concerning the course design. Also, it describes the achievements of the experience, with the objective of identifying potential benefits of Teacher Professional Development initiatives based on MOOCs in the frame of emergency conditions. It analyzes teachers' contributions and interactions during the course to assess appropriation of educational principles, methodologies and tools applied to online course redesign in the light of Critical Digital Pedagogy and Pedagogy of Care. The initiative ended up being an enriching alternative to approaching Teacher Professional Development, emphasizing its relevance in the context of rapid response to the transition to Emergency Remote Teaching. This experience adds up empirical data, to a necessary accumulation that would in time, allow more generalizable appreciations.

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1. INTRODUCTION

Since early 2020, the world's educational systems have been challenged by the emergency of COVID-19, having to turn to technology to guarantee the right to education. Social injustice, inequality and the digital divide have been exacerbated during the pandemic, requiring unique and specific measures to address them, based on affection and empathy, open education perspectives, and significant concerns about ethics, surveillance practices and data privacy that result from dependence on some online private solutions (Bozkurt et al. 2020). The strategy most generally implemented has been called Emergency Remote Teaching (ERT), which differs from those characterized as Distance Education (Bozkurt et al. 2020). The potential impacts of the so-called Great Onlining (Brown, Costello & Giolla 2020), generate concerns that involve the way that these ERT practices could in some cases result in uncritical and dubious quality models (Williamson, Macgilchrist, & Potter 2021). These practices could negatively affect the current Higher Education scenario, deepening the ongoing digital transformation of the universities (Selwyn 2014; Castañeda & Selwyn 2018), characterized by the rise of globalized neoliberalism as a major external factor (Selwyn 2014).

On March 13, the first positive case of Coronavirus (COVID-19) placed Uruguay in the global scenario of the pandemic. The Universidad de la República (Udelar), the biggest and oldest public university in the country, was immediately oriented to guarantee the right to education of more than 135,000 active students throughout the national territory (DGPlan 2019). The aim was to sustain Higher Education, while minimizing the academic and social impact (Rodés & García-Lutz 2020).

Considering online course design is an integral part of a teacher's role which largely rests on institutional support (Martin et al. 2019), online course design in emergency contexts is even more dependent on a carefully planned, institutionally supported Teacher Professional Development (TPD) program. This program should involve strategies that would foster critical reflection and promote an understanding of the teaching decisions that these processes involve.

This article describes and analyzes one of the first TPD experiences in the pandemic emergency at Udelar, which aimed at facilitating and scaffolding course migration, from face-to-face to online environments. We present the theoretical and methodological approach, the process and decisions concerning the chosen TPD strategy. We also analyze and evaluate the achievements, with the objective of identifying potential benefits of TPD initiatives inspired by the MOOC model, grounded in Critical Digital Pedagogy and Pedagogy of Care. This innovative experience, considered and pondered within the context of a massive global emergency, contributes to the foundations of a Digital University model based on appropriate, sovereign, and critical developments.

2. THEORETICAL BACKGROUND

Addressing the challenge of a course migration within the already complex context of Higher Education and digitally mediated processes during pandemic times, requires some initial considerations. Educational practices are better analyzed with the wider context of socio-economic and political changes taking place worldwide.

Universities have been threatened by the neoliberal model for more than four decades, as a worldwide phenomenon (Harland 2009; Giroux 2002, 2005; Marginson & Rhoades 2002). In Latin America, the neoliberal reform was characterized by the increase in access to Higher Education, in tension with the deepening of the social and cognitive gap that expels the poorest sectors or relegates them to a Higher Education of lower quality, and privatization (López Segrera 2007; Brunner 2007).

This privatizing process delves into the current Digital University, which treats educational technology as a market server, and students as clients (Johnston, MacNeill & Smyth 2018). In the context of the current pandemic, platform capitalism (Srnicek 2017) was deepened, accelerating the process of colonization of education by large corporations: Google, Apple, Facebook, Microsoft, Amazon and Zoom (Williamson, Eynon & Potter 2020).

To contribute to sustainable development models, and to question the neutrality of pedagogy and technology, a Critical Digital Pedagogy approach is essential. It is crucial in the case of public Latin American universities, especially focused on guaranteeing educational continuity

in political, social and economic settings characterized by inequity and exclusion, and the privatization of education and technological infrastructures (Didriksson 2020).

Critical Digital Pedagogy implies centering practice on community and collaboration, remaining open to diversity, creating dialogues for teachers and learners as full agents, as a method of resistance and humanization (Morris & Stommel 2017). An appropriate, sovereign, and critical approach implies addressing digital literacy and the transformation of the curriculum (Goodson 2005), as key dimensions of the Digital University committed to social justice (Johnston, MacNeill & Smyth 2018). A critical digital pedagogical perspective constitutes a central emancipatory element (Stommel & Morris, 2018). Within this perspective, the construction of a Digital University is addressed as a public good (Solbrekke & Sugrue 2020; Johnston, MacNeill & Smyth 2018; Aronowitz 2000). This approach has a long tradition rooted in Latin American public, co-governed and free macro-universities (Arocena & Sutz 2017).

Addressing these highly complex problems, within the framework of a pandemic and from a Pedagogy of Care perspective, involves significant challenges. It integrates the perspective of an ethic of care (Barnes et al. 2015) as a fundamental dimension of teaching practice (Noddings 2013; Adams & Rose 2014) and the consideration of teaching as an experience of care. This perspective implies analyzing dimensions of power, class, ethnicity, culture and access, in order to minimize inequality and maximize the degree to which relationships are reciprocal and oriented towards social justice (Rolón-Dow 2005). In addition, in the context of ERT, the need to intentionally position a Pedagogy of Care in online learning emerges (Burke & Larmar 2021).

The challenge involves identifying TPD strategies that would allow for facilitating a reflective process, with an approach from Critical Digital Pedagogy and Pedagogy of Care, seeking to address diversity and vulnerability in the face of the emergency (Morris & Stommel 2017).

Moreover, migrating a face-to-face course to an online environment requires a reflective open attitude to face the redesigning process (Bates 2016). Those challenges teachers confront should involve an understanding of the differences among teaching modalities and methodologies, as well as the development of certain competencies related to the use of a variety of digital environments.

The TPD strategy adopted should also be a window of opportunity for innovation. Innovation means creating new rules and practices which are different from those already known and proposing alternative models based on new conceptions (Martínez Bonafé 2008). Innovation is a process, a praxis, not an isolated action; rather, it is an informed and deliberative practice that combines reflective thinking and informed choice, a deliberate and controlled process of change implementation.

Although the target group of teachers have not been provided with pedagogical training, both teaching experience and disciplinary knowledge have set a foundation for those teachers to find a way of conceiving and implementing teaching, mainly in face-to-face environments (Porta, Motz & de Querioz Lopes 2020; Graham 2015). Both this accumulated experience and the specific knowledge of the subject matter, add up to the teacher's familiar set of teaching practices. This prior technological pedagogical content knowledge (Mishra, & Koehler 2006) constitutes an unavoidable starting point for any TPD process.

Within this context, the chosen TPD approach should provide the basic theoretical and practical tools, so that teachers can critically rethink their courses and redesign them, as agents of curriculum change (Goodson 2005). The challenge involves generating a flexible and safe work environment and engaging in reflective cycles upon their experience (Borko, Jacobs & Koellner 2010). To enrich this process, the contribution of theoretical and methodological tools should also be considered, allowing academic professionals to build new perspectives on teaching and learning processes. This discovery and development process is enriched in the exchanges (Gast, Schildkamp & van der Veen 2017). The possibility of getting involved in instances of dialogue among peers, experiencing the same process, in the manner of the open Academic Communities of Learning and Practices (Czerwonogora & Rodés 2019), constitutes a fundamental instance to conceiving and producing applicable pedagogical-didactic designs.

As for the specific strategy developed, it was a TPD course called *"Teaching online under emergency conditions"*, an initiative of the Educational Sectoral Commission. The design and implementation of this initiative was inspired by the MOOC delivery model, aimed at massive outreach to Udelars teachers, more than 11,000. The sanitary emergency caused by COVID-19

required quick TPD response for ERT, and these MOOC-inspired strategies have been positively evaluated (Ebner & Schön 2020; Huang et al. 2020).

The characteristics of MOOCs have been evolving since their start. Initially, a certain polarization was considered between those that were based on connectivism as a learning theory and those based on a cognitivist or behaviorist approach, however with their evolution these limits have become somewhat diffuse, associating them with multiple forms and pedagogical intentions (Trehan et al. 2017). The "Open" condition of these courses has also been transformed. Arising from the Open Courseware movement, which understands openness as something free, accessible, and reusable, MOOCs tend to depart somewhat from this conception and understand the idea of openness as something partially free and accessible, and generally not reusable. Even with the appearance of business models that work on the basis of MOOCs, their openness has been increasingly reduced.

A Critical Digital Pedagogy perspective on MOOCs involves reinventing them and their relationship with Open Education, generating collaborative spaces for intrinsically motivated co-intentional education, online learning, and critical practice (Morris & Stommel 2017). Following these authors, Critical Digital Pedagogy demands that open educational environments be more than content repositories, therefore, a MOOC cannot simply be a delivery device, but must first be aimed at building empowered communities, making MOOCs a space for dialogue, openness and change (Morris & Stommel 2017).

3. DESIGN AND IMPLEMENTATION

The Virtual Learning Environment Program -in Spanish Programa de Entornos Virtuales de Aprendizaje (ProEVA)- published a *Contingency Plan* (ProEVA 2020). This plan provided an institutional framework to contextualize, develop and deploy further strategies and devices that would adapt to the variety of situations within. In May 2020, ProEVA launched the first edition of the TPD Course *"Teaching online under emergency conditions"*. The course was developed together with university experts from different faculties and institutes, seeking to attend to the diversity of fields of knowledge and educational perspectives.

The following main traits describe the way this MOOC-inspired course was implemented: It was placed on an institutional open-source platform: Moodle. It did not collect personal data. The content was licensed as open for reuse, constituting an Open Educational Resource. It was conceived as a reflective MOOC rather than content-centric, and considering variables related to the Pedagogy of Care: simplicity, commitment, and empathy, deepening human contact. On the other hand, the perspective of care extends to technological resources, in whose selection a rigorous analysis that includes ethical and digital rights is promoted.

The challenge of an unknown context required that university teachers redesign, in order to fit a different environment and integrate technological mediation. The professional development strategy selected would have to help those teachers walk through this redesigning process in no more than fifteen days. It was essential that the strategy consider the urgency of the moment, proposing feasible, effective results in a really short time. Teachers needed a coping strategy that would help them deal with the uncertainty and complexity of the time, as inspired by the caring paradigm (Medina & Sandín 2006). A principle to keep in mind was that educating requires caring for each other and for students, managing limited energy and resources. This would have to be a core part of the proposed course. It meant posing realistic objectives, brief but sound content and achievable tasks that would both cater for affective needs and practical, easily implemented pragmatic knowledge. Those were the main inspiring ideas around which the course was created.

3.1 COURSE STRUCTURE

The instructional design sought to maintain a common logic and aesthetics that would allow the recognition of various learning spaces. It offered activities and tasks existing in the VLE with meanings different from those used in a conventional way, so that the participants could access the various resources and so they would also use the design as a model for their new practices.

Module 1, called *Redesign of online teaching,* aimed to conceptualize transformations in the framework of online teaching and learning in emergency conditions and to promote the critical appropriation of methodologies and tools for designing ERT. Topics addressed were blended

education contents, expanded and flipped classroom, open, distance and online teaching, ERT, methodologies for the redesign of teaching in digital environments, activities and OER in the design of teaching in the VLE. Multimedia digital technologies were presented with a strong commitment to social justice in their selection and use.

Module 2 called *Online assessment of learning* had the following content: formative, continuous and summative evaluation, self-evaluation, peer evaluation, distance evaluation in times of emergency, evaluation design tools in VLE, and rating methods. In this module evaluation took place by means of questionnaires, rubrics, and games, promoting the experimentation of different evaluation modalities. In this module, the aim was to promote caring pedagogies in learning assessment, as opposed to proctoring, in consideration of the context of the extremely vulnerable situation in which students found themselves.

The *Bonus Track* was a section that included videos made by invited professors, recognized international experts in open and critical digital education: Catherine Cronin, Rory McGreal, Alejandra Ambrosino, Adriana Gewerc, Carina Lion, Tel Amiel, Ignacio Aranciaga and Juliana Raffaghelli. They shared one-minute videos with a piece of advice and inspiration for the redesign of ERT.

The Tutoring process was an option to continue aimed at those students who, having completed the activities of both modules, expressed interest in a critical reflective dialogue for a guided formative ERT design process as agents of curriculum change. This combination resulted in a MOOC-inspired course enriched with a Tutoring process. The tutoring process involved two weeks of intense work. This activity was combined with active and collaborative participation in two synchronic sessions via webconference (Jitsi). The approval of the Tutoring process was achieved by completing the supervised final work, in which students redesigned the course or course segment for ERT.

3.2 COURSE METHODOLOGY

The formative process proposed an evolutionary approach that placed teaching as the most significant and meaningful element in a network of relationships (Jackson 2002). It addressed quality considering the context in which it was taking place, understood as the physical and online environment, the notions, the previous assumptions, and the events influencing the activity.

The methodology focused on the teachers' own course redesign, proposing a cycle (*Figure 1*), based upon a continuous reflection on their practices, addressing the ideation and implementation process that would be involved in the migration from their face-to-face proposals to ERT. The process would mainly be focused on familiar practices, but it would be nurtured by educational resources, assessment tools and activities that proposed critical reflective thinking and exchange.

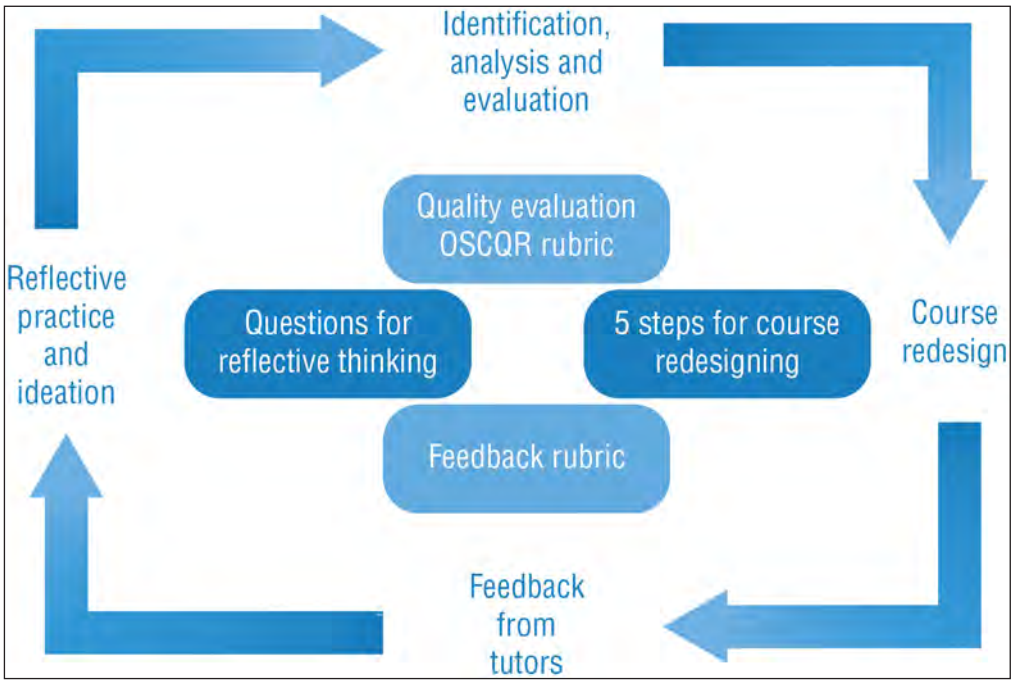

Figure 1 Course learning cycle and tools.

3.3 IMPLEMENTATION

Implementation involved 700 university teachers (about 16% of the target population, the total number of faculties) that expressed interest in the course through the registration form. Modality 1 lasted two weeks. 498 participants, 71% of the total number, enrolled. The Tutoring process, organized in two cohorts and coordinated in pairs by the teaching team, was undertaken by 83 teachers. 70% successfully completed all the redesign activities.

3.3.1 Participants: characterization and engagement

The characterization of the participants according to their discipline, faculty or institute and self-perceived competency level in technology assisted teaching, was obtained from the self-administered registration form. These data were analyzed, aiming at characterizing the population and participants' profiles.

Figure 2 shows the origin of the participants, in relation to the university service and the area of knowledge. Although there is a higher proportion of teachers in the Health Sciences area, approximately a half, all areas of knowledge, and university services had considerable participation.

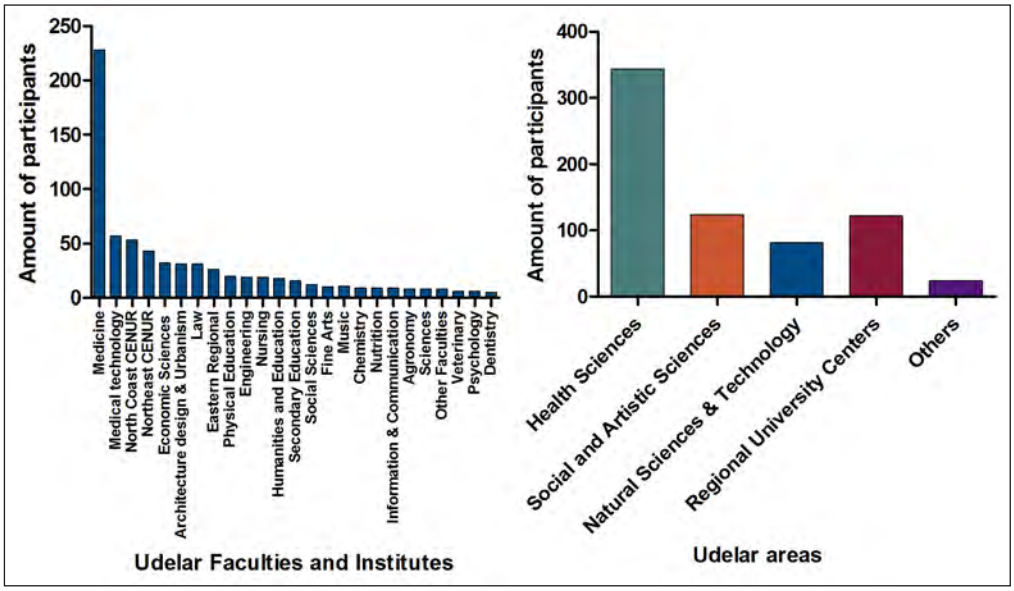

Figure 2 Udelar service (left) and knowledge area (right) of the registered participants.

Added to the disciplinary differences, the diversity in their knowledge in digital technologies and in university teaching experiences, posed an additional challenge. Self-perception of the participants' digital technology training was at a medium level. Thus, 28% of those enrolled said they perceived their level of training as low, while 11% understood that they had extensive training in the topics addressed.

The analysis of the participants' engagement was carried out from the count of interactions per user (Queiroga et al. 2020; Queiroga, Cechinel & Araújo 2017). Participants' engagement was considered in terms of task completion (self-evaluation activities) and degree of course completion. They are distributed according to Milligan's typology (Milligan, Littlejohn & Margaryan 2013) in 202 absent, 136 observers, 156 lurkers, and 206 active participants.

The marked participation in self-assessment and reflective activities, designed to allow the participants to advance in the course, emerges as a relevant aspect. Lurkers also contributed to these records. There is a spontaneous high participation in exchange forums, showing a higher frequency of interactions, even though this was the only activity that was not evaluated.

4. EVALUATION OF THE EXPERIENCE

The course content, activities and methodology have been broadly explained above. We believe that the TPD experience has motivated a deep reflective process for the teacher educators. However, this article reflects on a second approach to the experience: *that of researchers who have observed some valuable evidence of teachers' professional development and digital*

technology appropriation processes. What follows reflects these researchers' perspectives and inferences drawn from observation analysis and interpretation of teachers' production in the context of the course. It proposes an analytic and reflective outlook into participants' work. The content produced by course participants was considered since it constitutes documentary evidence which reveals how they have transitioned their Higher Education teaching throughout pandemic times and where they seem to have arrived. The course learning cycle diagram introduced above in ***Figure 1***, shows this transition.

4.1 REFLECTIVE PRACTICE AND IDEATION OF CURRICULUM CHANGE

The cycle proposed in the course has considered a process that transitions from course ideation to course design, nurtured by evaluation and reflective moments. Beginning at the reflective practice, the teachers filled in a questionnaire, consisting of open questions organized by topics. This tool aimed to foster a critical reflective process on personal teaching objectives, approaches and practices, and ideation of curriculum change. Answers to the open-ended questions were coded and analyzed using AtlasTi. The following categories were considered: *teachers and students' roles*, *resources*, *processes and strategies and assessment*. Results are presented below, including quotations from the teachers' answers.

Regarding *roles*, the most frequent words in the teachers' reflective practice were *learning* and *reflection*. Their own roles were conceived as *facilitators*, *advisors,* and *moderators*. They referred to motivating students and evaluating, displaying actions such as delivering content, questioning, contributing, collaborating, and anticipating priorities. Teachers' perspectives on their roles seem to gravitate towards a student-centered, learning-as-a-process conception, away from a more teacher-centered, directive instructional paradigm. There is also a certain concern about the affective domain of learning making classes enjoyable and teaching actions supportive.

> *"The role may be to encourage the use of alternative communication channels to take advantage of the time and make the learning process a little more enjoyable for each student."*

> *"I think that whatever they are given will depend on the motivation of the students and that is where our role comes in to promote this work dynamics and support them in the process."*

Regarding *resources*, teachers' references suggest the development of awareness of the possibility of selecting or creating resources in a variety of formats and media. Also some concern about the way students will access those materials can be appreciated. They also show sensitivity about the openness of those resources and interest in knowing how to set open licenses. Reflection, organization, activities and delivery are the most mentioned. In relation to resources formats for remote teaching, frequent words are: links, texts, audio, audiovisual, lessons and contents in varied supports. Accessibility and adaptation are important issues for teachers.

> *"[regarding] resources, I consider that virtual ones do not replace face-to-face interaction. We are facing a paradigm shift, without a doubt, so it is imperative to follow the processes, to understand them".*

> *"Open educational resources would be the best option, within the platform there are a variety of them that could be used".*

Processes and strategies refer to the educational methodology deployed by the teacher. Teachers display a variety of technical concepts to describe the processes they are interested in promoting. In this regard, reflection on practices and attention to students were relevant issues, as well as difficulties resulting from the educational emergency. Understanding students' knowledge and feedback, collaborative activities, meetings, and formative, dynamic and flexible strategies are mentioned. Teachers seem to have embraced collaborative and interactive classroom dynamics.

> *"... process to ignite the desire for the search for knowledge, which is something wanted and longed for."*

> *"...teaching strategy and course evaluation, anticipating the gaps between the learning objectives we plan and the previous competencies of the students."*

Assessment has been a critical issue in the framework of the health emergency, requiring transformations that allow considering the diversity of student situations while guaranteeing its validity. Teachers went for formative and self-assessments, and reflective and integrative works. Summative assessment based on strategies like questionnaires, tests, and multiple choice, appears to be combined with self-reflection, participation activities presentations and co-evaluation. Course assessment was highlighted, in order to know difficulties in delivery of activities and content. Teachers display a wide repertoire of tools and strategies and plan on proposing different kinds of evaluations:

> *"I think it is important to generate an exchange with the students and have feedback from them, to be able to anticipate which of the resources may work and which will be more difficult".*

> *"[...] assessment: I consider it to be one of the biggest challenges at the moment, I do not have an answer to these questions, but I do think that an assessment that is throughout the course would be better and also close with a more formal instance (exam), mainly thinking about massive courses".*

4.2 TEACHING ONLINE REDESIGN

In the final activity of the Tutoring process, participants redesign a complete course, a course segment or learning assessment. To guide them in this task, a redesign guidelines document was proposed, which involved a five step decision process: considering course consistency of objectives and design choices, deciding upon use and articulation of environments and technologies, defining course content and activities, setting interaction channels and developing assessment strategies (see ***Figure 3***). This document was developed considering all the teaching dimensions dealt with throughout the course, organized in an orderly manner so as to facilitate the process. The suggested process involves an initial ideational moment for conceiving and decision making and a time to execute decisions by developing the tools, selecting, creating resources, or making the necessary adaptations. Final deliverables would include: the proposal outline and a text that supports and explains the foundations of the redesign proposal. This final task was assessed with a rubric that considered the following dimensions: *course consistency*; *environment and technology use and articulation*; *content and activities; interaction*; and *learning assessment*. Course participants received detailed feedback clarifying achievements and areas of improvement.

	Transfer stage	Transitional stage	Innovative stage
Course consistency (design matches objectives) and support	11,54%	44,23%	44,23%
Environment and technology use and articulation	11,54%	46,15%	42,31%
Content and activities proposed	13,46%	42,31%	44,23%
Interaction between teachers and students, between students and resources and among students	13,46%	44,23%	42,31%
Learning Assessment, processes and results	34,62%	30,77%	34,62%

Figure 3 Evaluation of redesign stage.

As part of the evaluation of this experience, these final tasks act as pieces of evidence of teachers' professional development regarding online teaching. Distribution among categories and stages are shown below in ***Figure 3***.

The assessment question this time has been: To what extent have teachers in this professional experience been able to appropriate digital technologies so as to harmoniously integrate them into a consistent, applicable course design? Which of the following stages are teachers at, individually and what does this assessment explain about the teachers who have successfully finished the complete experience? Results show the following:

transfer stage: As observed in the figure below, 12 to 13% of teachers are at this stage in dimensions 1 to 4: course consistency, environment and technology, content and activities and interaction. Their proposal adapts content to the new environment, mainly simulating the face-to-face course. Digital environments and tools are used mostly as repositories or to reproduce classroom dynamics. For example, uploading bibliography or creating questionnaires.

transitional stage: 42 to 46% are at a transition stage in dimensions 1 to 4. The proposal shows a deliberate intention of exploring digital environments and tools. There is some awareness of the specificity of digital mediation and possibilities in teaching. For example, there might be audiolingual resources or forum activities with tutoring teachers.

innovative stage: 42 to 44% of teachers have stepped into innovative designs in dimensions 1 to 4. Their proposal incorporates a new perspective that makes use of specific possibilities of digital environments and tools. For example, collaborative activities are proposed, a variety of evaluation tools are implemented.

The one dimension that clearly shows evidence of a different, slower appropriation process is learning assessment. 35% of teachers propose evaluation strategies that simulate traditional face to face evaluation practices, 31% have started transitioning towards more innovative uses, integrating more formative kinds of assessment. 35% have started innovating and enlarging their repertoire of evaluation tools.

4.3 EVALUATION OF THE EXPERIENCE BY THE PARTICIPANTS

The participants' evaluation of the MOOC and the TPD experience provides input that enriches the reflection and further work. Regarding the educational proposal and its relationship with motivation, 91% expressed that the course fulfilled their expectations and 94% that the contents were a relevant contribution to consider in their teaching practice.

A qualitative analysis of open responses reveals three aspects mentioned: quality of the content, relevance of the course and course dynamics. The quality of the content was characterized as valuable, excellent, successful, enriching and novel. Knowledge about assessment, in relation to its conception and available tools, was especially valued. Regarding course relevance, it was highlighted as useful and timely given the emergency context, particularly the relevance in terms of the timing and the flexibility of its modality. Also, teachers were very expressive about the importance of this space as a place for being cared for.

5. DISCUSSION AND CONCLUSIONS

At the end of this stage, it is necessary that spaces for reflection be generated, so that lessons learned can emerge and connections can be made between what has been experienced and already existing TPD actions.

The high response and satisfaction with this MOOC-inspired TPD initiative, enables future projects with further improved proposals of this sort. The results of the evaluation carried out by the participants are consistent with other recent similar initiatives that allowed conceptualization of MOOCs as an efficient environment to enhance TPD (Koukis & Jimoyiannis 2019). MOOCs have been a viable alternative to address TPD, but it is recognized that, as a tool for this purpose, they are still in an initial stage (Ji and Cao 2016) and they require more analysis about quality and adequacy.

The volume of teachers reached, and the response achieved confirm aspects already addressed in previous studies: the good reception by teachers (Van de Poël & Verpoorten 2019; Koutsodimou & Jimoyiannis 2015), the benefits of flexibility and the scalability of the proposal to meet professional development objectives (Vivian, Falkner & Falkner 2014; Kennedy & Laurillard 2019) and effectiveness in terms of costs and use of resources (Wambugu 2018). However, the effectiveness and design of MOOCs as a TPD tool is still being researched. In this sense, some studies refer to its promising character for equality, quality and efficiency in global education. Wambugu (2018) refers to MOOCs as TPD tools and points out their untapped potential. MOOCs admit persistence formats with successive returns to the same course in order to reaffirm or expand knowledge, an aspect that is expected to be explored in future editions of our course. Other activities have been planned for future implementation, such as the combination of the self-delivered course with Academic Professional Learning Community (APLC) (Czerwonogora & Rodés, 2019). In this sense, it is essential that the MOOC model be designed keeping in mind the following characteristics: it should promote teachers learning, active engagement, peer interaction, mutual support, and collaborative creation of educational artefacts (Koukis & Jimoyiannis 2020), as it is conceived in the experience presented.

Active participants, observers, and lurkers, reveal different levels of involvement, which reveal teachers' diverse needs, possibilities and interests, something that has been explored in the evaluations that the participants make of the course, and in the engagement profiles. The qualitative analyses developed allowed us to assess the impact of this MOOC-inspired TPD experience for the transformation of teaching practices. According to these findings, the course learning cycle allowed us to follow the Pedagogy of Care framework (Noddings 2013; Burke and Lamar 2021), first by modelling and dialogue, then followed by practice and confirmation. Regarding the last, analysis of this experience has continued in the current development of autoethnographies (Ellis, Adams & Bochner 2011) carried out with 10 of the participants who have agreed to participate.

It is relevant to identify emerging MOOC models that go beyond the transmissive ones (Morris & Stommel 2017). Critical Digital Pedagogy requires designing educational technologies in accordance with ethical principles and forms of property based on common goods (Lazarus 2019). This Critical Digital Pedagogy perspective includes the right to access, to privacy, to create public knowledge, to possess personal data and intellectual property, to financial and pedagogical transparency, to be cared for, to have great teachers and to be teachers (Morris & Stommel 2013).

From the point of view of Critical Digital Pedagogy, in the present experience, it was important that the content of the MOOC-inspired course included theoretical tools that would contribute to a deeper analysis, developing teacher literacy, increasing their repertoire of perspectives to critically analyze their own educational practice. Also, an emphasis is placed on Pedagogy of Care. This caring involves different dimensions. In the case of the teachers in this context of the MOOC it meant making a design which could eventually be deepened but it should avoid teachers' work overload. It had to be enough to introduce the main debates about online teaching and ERT, but it needed to promote a teaching design that would be careful about students' vulnerability. And finally, it had to instill a perspective of care for the university community and its resources, and of the internet resources themselves, considering the materiality of digital technology as a finite resource (Borning, Friedman & Logler 2020).

This TPD program revealed an understanding of the MOOC itself as a format that can be combined with other kinds of designs such as academic communities of learning and practice. It can be said, from experience, that a MOOC is not a tool that, by itself, satisfies all TPD needs, but it can be part of a combination with other subsequent or parallel strategies. A MOOC, or MOOC-inspired course, can become an OER which may be integrated to a TPD design that generates instances for interaction and exchange. For example, these designs could request that teachers go through the MOOC first, in hybrid education modalities. The evolution of the MOOC from a teaching format to an OER would be possible only if it is a truly open MOOC, designed with open licenses, openly shared, and openly developed with open software. So, it is important to return to this issue of MOOCs becoming OER. This kind of decision is also based on the Critical Digital Pedagogy approach.

It is important to mention the limitations of the presented experience. The TPD experience opened a space to the teachers for reflection. It mobilized emotions and learning experiences, but there wasn't enough time and space to work on these emergent outcomes.

Another important aspect to be highlighted was the high, spontaneous number of conversations among the participating teachers that took place in the exchange forum. It overflowed, showing that teachers want more instances of this kind. The forum became a space for collaboration among peers because they responded to each other's doubts, needs and suggestions. The lesson learned here was that many times a training tool may be developed with some expectations, which may be fulfilled, but other unexpected, emerging results could spring up. The aforementioned lessons learned are currently being approached in the new project "*Digital University: towards critical literacy for the transformation of teaching practices*", aimed to develop Academic Professionals' Learning Community. The intention is that what was deeply mobilized in the teachers' individual experiences can be given more ways to enable shared reflective practice and collaboration.

The TPD strategy implemented promotes a process of professional strengthening aimed at expanding academic knowledge, improving professional teaching skills and teaching capacities. It requires both access to adequate resources and content, as well as spaces for reflection and exchange. This second need is the one that MOOCs least satisfy, given their massiveness. This aspect has also been evident in the way in which teachers appropriated the forum space, an activity that presents the highest frequency and is the only one that was not part of the battery of accrediting evaluations for approval. This space becomes an area of interaction, support of the activity and learning processes, an incipient APLC that would later have more possibilities of realization in the Tutoring, an aspect that will be addressed in future work.

The need to combine the educational principles addressed in a generic way through the units proposed in the MOOC, with the immediate reality and localized practice, have already been identified as emerging results (Kennedy & Laurillard 2019) which motivate us to think about the benefit of combining massive learning experiences with the development of self-sustaining digital communities. The applicability of MOOCs to the TPD task also motivates us to reflect on the type of participant that can benefit from this modality and on the possible benefits of continuing to explore this tool.

Regarding the specificities of university teachers, their usual lack of pedagogical training, their trajectory and experience in research and disciplinary specialization should be pointed out. They are academic professionals who have a repertoire of competencies in the area, which allow an autonomous use of resources and intellectual production. Although they share an academic culture, which generally does not thematize teaching, they participate in academic communities that favor a collaborative construction of knowledge. In the context in which this course is generated, the conditions require considering teaching as a problem and as a challenge. The possibility of generating spaces where teaching, its principles and practices are addressed, constitutes a pending debate, which is updated by the force of circumstances.

We understand that multiple lines of future work emerge from the diversity and richness of the reported experience. On the other hand, it opens a line of analysis from a qualitative approach oriented to the study of participation profiles, as well as in the reflection processes on the redesign of tutoring practices. Finally, the communities of interprofessional practice begin to emerge as a work environment, due to the richness of the interaction among teachers from different disciplines, professional development paths and research areas, in the common construction of knowledge in a collaborative way, starting from the habit of problematization.

ETHICS AND CONSENT

The study did not require approval by any ethics committee. By registering for the course, the participants gave their consent to participate in the study. The identity of the research subjects was anonymized before the qualitative analysis. For learning analytics, anonymized and decoupled databases were available to researchers. Security measures were taken to ensure the confidentiality of personal data, together with measures to prevent the adulteration, loss, consultation, or unauthorized access of the data.

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COMPETING INTERESTS

The authors have no competing interests to declare.

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REFERENCES

Adams, C and **Rose, E.** 2014. Will I ever connect with the students? Online teaching and the pedagogy of care. *Phenomenology & Practice*, 8(1): 5–16. DOI: *https://doi.org/10.29173/pandpr20637*

Arocena, R and **Sutz, J.** 2017. *La universidad Latinoamericana del futuro: Tendencias, escenarios, alternativas*. UNICEN. Available at *http://beu.extension.unicen.edu.ar/xmlui/handle/123456789/197*.

Aronowitz, S. 2000. *Higher education as a public good*. Routledge.

Barnes, M, Brannelly, T, Ward, L and **Ward, N.** (eds.) 2015. *Ethics of care*. Bristol University Press. DOI: *https://doi.org/10.2307/j.ctt1t89d95*

Bates, T. 2016. *10 Fundamentals of teaching online for faculty and instructors*. Canada: Contact North. Available at *http://teachonline.ca/10fundamentals*.

Borko, H, Jacobs, J and **Koellner, K.** 2010. Contemporary approaches to teacher professional development. *International Encyclopedia of Education*, 7(2): 548–556. DOI: *https://doi.org/10.1016/B978-0-08-044894-7.00654-0*

Borning, A, Friedman, B and **Logler, N.** 2020. The "invisible" materiality of information technology. *Communications of the ACM*, 63(6): 57–64. DOI: *https://doi.org/10.1145/3360647*

Bozkurt, A, et al. 2020. A global outlook to the interruption of education due to COVID-19 Pandemic. *Asian Journal of Distance Education*, 15(1): 1–126. DOI: *https://doi.org/10.5281/zenodo.3878572*

Brown, M, Costello, E and **Giolla, M.** 2020. *The good, the bad and the ugly of teaching online*. National Institute for Digital Learning, Dublin City University. Available at *https://www.icde.org/icde-blog/2020/3/26/responding-to-covid-19*.

Brunner, JJ. 2007. Dr. Prometheus visits Latin America. In: Enders, J and van Vught, FA (eds.), *Towards a cartography of higher education policy change. A Festschrift in Honour of Guy Neave*. Center for Higher Education Policy Studies (CHEPS). Available at: *https://research.utwente.nl/en/publications/towards-a-cartography-of-higher-education-policy-change-a-festsch* (Last accessed 3 September 2018).

Burke, K and **Larmar, S.** 2021. Acknowledging another face in the virtual crowd: Reimagining the online experience in higher education through an online pedagogy of care. *Journal of Further and Higher Education*, 45(5): 601–615. DOI: *https://doi.org/10.1080/0309877X.2020.1804536*

Castañeda, L and **Selwyn, N.** 2018. More than tools? Making sense of the ongoing digitizations of higher education. *International Journal of Educational Technology in Higher Education*, 15(1): 22. DOI: *https://doi.org/10.1186/s41239-018-0109-y*

Czerwonogora, A and **Rodés, V.** 2019. PRAXIS: Open educational practices and open science to face the challenges of critical educational action research. *Open Praxis*, 11(4): 381. DOI: *https://doi.org/10.5944/openpraxis.11.4.1024*

DGPlan, Dirección General de Planeamiento, Universidad de la República. 2019. *Síntesis estadística de la universidad de la república*. Montevideo, Uruguay.

Didriksson, A. 2020. La educación superior en América Latina y el Caribe: El reto de la desigualdad frente a los ODS. *Revista Educación Superior y Sociedad (ESS)*, 32(2): 279–304**.**

Ellis, C, Adams, T and **Bochner, A.** 2011. Autoethnography: An overview. *Historical Social Research*, 36(4): 273–290.

Gast, I, Schildkamp, K and **van der Veen, JT.** 2017. Team-based professional development interventions in higher education: A systematic review. *Review of educational research*, *87*(4): 736–767. DOI: *https://doi.org/10.3102/0034654317704306*

Giroux, HA. 2002. Neoliberalism, corporate culture, and the promise of higher education: The university as a democratic public sphere. *Harvard Educational Review*, 72(4): 425–463. DOI: *https://doi.org/10.17763/haer.72.4.0515nr62324n71p1*

Giroux, HA. 2005. The terror of neoliberalism: Rethinking the significance of cultural politics. *College Literature*, 32(1): 1–19. DOI: *https://doi.org/10.1353/lit.2005.0006*

Goodson, I. 2005. *Learning, curriculum and life politics: The selected works of Ivor F. Goodson*. London; New York: Routledge (World library of educationalists series).

Graham, R. 2015. *Does teaching advance your academic career? Perspectives of promotion procedures in UK higher education*. London, England: Royal Academy of Engineering.

Harland, T. 2009. The university, neoliberal reform and the liberal educational ideal. In: Tight, M, Mok, KH, Huisman, J and Morphew, C (eds.), *The Routledge International Handbook of Higher Education*. Routledge. DOI: *https://doi.org/10.4324/9780203882221-37*

Huang, YL, Xie, YR, Qiu, Y, Yuan, Q, Liu, YC and **Thong, HW.** 2020. Research on support services of MOOC-based online teacher professional development during the COVID19 pandemic. In: *Ninth International Conference of Educational Innovation through Technology*. Porto. 52–57. DOI: *https://doi.org/10.1109/EITT50754.2020.00015*

Jackson, P. 2002. *Práctica de la enseñanza*. Buenos Aires, Argentina: Amorrortu.

Ji, Z and **Cao, Y.** 2016. A prospective study on the application of MOOC in teacher professional development in China. *Universal Journal of Educational Research*, 4(9): 2061–2067. DOI: *https://doi.org/10.13189/ujer.2016.040917*

Johnston, B, MacNeill, S and **Smyth, K.** 2018. *Conceptualising the digital university*. England: Palgrave Macmillan. DOI: *https://doi.org/10.1007/978-3-319-99160-3*

Kennedy, E and **Laurillard, D.** 2019. The potential of MOOCs for large-scale teacher professional development in contexts of mass displacement. *London Review of Education*, 17(2): 141–158. DOI: *https://doi.org/10.18546/LRE.17.2.04*

Koukis, N and **Jimoyiannis, A.** 2019. MOOCS for teacher professional development: Exploring teachers' perceptions and achievements. *Interactive Technology and Smart Education*, 16(1): 74–91. DOI: *https://doi.org/10.1108/ITSE-10-2018-0081*

Koukis, N and **Jimoyiannis, A.** 2020. Towards a design framework of MOOCs for teacher development. *Themes in eLearning*, 13: 69–86. Available at *http://earthlab.uoi.gr/tel/index.php/themeselearn/article/view/27*.

Koutsodimou, K and **Jimoyiannis, A.** 2015. MOOCs for teacher professional development: Investigating views and perceptions of the participants. In: *8th International Conference of Education, Research and Innovation*. Seville, Spain.

Lazarus, J. 2019. Hacking the MOOC: Towards a postdigital pedagogy of critical hope. *Postdigital Science and Education*, 1(2): 391–412. DOI: *https://doi.org/10.1007/s42438-019-00063-w*

López Segrera, F. 2007. *Educación superior internacional comparada (escenarios, temas y problemas)*. Global University Network for Innovation (GUNi).

Marginson, S and **Rhoades, G.** 2002. Beyond national states, markets, and systems of higher education: A glonacal agency heuristic. *Higher Education*, 43(3): 281–309. DOI: *https://doi.org/10.1023/A:1014699605875*

Martin, F, Budhrani, K, Kumar, S and **Ritzhaupt, A.** 2019. Award-winning faculty online teaching practices: Roles and competencies. *Online Learning*, 23(1): 184–205. Available at *https://files.eric.ed.gov/fulltext/EJ1211042.pdf*. DOI: *https://doi.org/10.24059/olj.v23i1.1329*

Martínez Bonafé, J. 2008. Pero¿ Qué es la innovación educativa. *Cuadernos de pedagogía*, 375: 78–82.

Medina, J and **Sandín, M.** 2006. La complejidad del cuidado y el cuidado de la complejidad: Un tránsito pedagógico de los reduccionismos fragmentantes a las lógicas no líneales de la complejidad. *Texto & Contexto Enfermagem*, 15(2): 312–319. ISSN: 0104-0707. Available at *https://www.redalyc.org/articulo.oa?id=71415216* (Last accessed 31 May 2021). DOI: *https://doi.org/10.1590/S0104-07072006000200016*

Milligan, C, Littlejohn, A and **Margaryan, A.** 2013. Patterns of engagement in connectivist MOOCs. *Journal of Online Learning and Teaching*, 9(2): 149–159. Available at: *https://eprints.gla.ac.uk/186192/1/186192.pdf*.

Mishra, P and **Koehler, MJ.** 2006. Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6): 1017–1054. DOI: *https://doi.org/10.1111/j.1467-9620.2006.00684.x*

Morris, S and **Stommel, J.** 22 January 2013. A bill of rights and principles for learning in the digital age. *Hybrid* Pedagogy [online]. Available at *https://hybridpedagogy.org/bill-rights-principles-learning-digital-age/*.

Morris, S and **Stommel, J.** 2017. Open education as resistance: MOOCs and critical digital pedagogy. In: Losh, E (ed.), *MOOCs and their afterlives*. Chicago: The University of Chicago Press.

Noddings, N. 2013. *Caring: A relational approach to ethics and moral education*. 2nd ed. Oakland, CA: University of California Press. Available at *https://www.jstor.org/stable/10.1525/j.ctt7zw1nb*. DOI: *https://doi.org/10.1525/9780520957343*

Porta, M, Motz, R and **de Queiroz Lopes, D.** 2020. Teachers' strategies for a multimodal teaching model in higher education. In: *2020 XV Conferencia Latinoamericana de Tecnologias de Aprendizaje (LACLO)*, 19–23 October 2020. 1–6. IEEE. DOI: *https://doi.org/10.1109/LACLO50806.2020.9381150*

ProEVA. 2020. *Plan de contingencia*. Programa de Entornos Virtuales de Aprendizaje, Comisión Sectorial de Enseñanza, Universidad de la República. Available at *https://proeva.udelar.edu.uy/plan-de-contingencia-del-programa-de-entornos-virtuales-de-aprendizaje-de-la-udelar/*.

Queiroga, E, Cechinel, C and **Araújo, R.** 2017. Predição de estudantes com risco de evasão em cursos técnicos a distância. In: *Anais do XXVIII Simpósio Brasileiro de Informática na Educação (SBIE 2017)*. 1547. DOI: *https://doi.org/10.5753/cbie.sbie.2017.1547*

Queiroga, EM, Lopes, JL, Kappel, K, Aguiar, M, Araujo, RM and **Munoz, R.** 2020. A learning analytics approach to identify students at risk of dropout: A case study with a technical distance education course. *Applied Sciences*, 10(11). DOI: *https://doi.org/10.3390/app10113998*

Rodés, V and **García-Lutz, G.** 2020. Emergency online learning at the Universidad De La República, Uruguay: Challenges for the post-pandemic digital university. In: *Proceedings of the European Distance and E-Learning Network (EDEN) 2020 Research Workshop*, Lisbon, 21–23 October 2020, 257–264. DOI: *https://doi.org/10.38069/edenconf-2020-rw-0028*

Rolón-Dow, R. 2005. Critical care: A color(full) analysis of care narratives in the schooling experiences of Puerto Rican girls. *American Educational Research Journal*, 42(1): 77–111. DOI: *https://doi.org/10.3102/00028312042001077*

Selwyn, N. 2014. *Digital technology and the contemporary university: Degrees of digitization*. London, New York: Routledge (Research into higher education). DOI: *https://doi.org/10.4324/9781315768656*

Solbrekke, TD and **Sugrue, C.** 2020. *Leading higher education as and for public good: Rekindling education as praxis*. Routledge. DOI: *https://doi.org/10.4324/9780429261947*

Srnicek, N. 2017. The challenges of platform capitalism: Understanding the logic of a new business model. *Juncture*, 23(4): 254–257. DOI: *https://doi.org/10.1111/newe.12023*

Stommel, J and **Morris, SM.** 2018. Critical digital pedagogy: A definition. In: Morris, SM and Stommel, J (eds.), *An urgency of teachers*. Pressbooks. Available at *https://pb.openlcc.net/urgencyofteachers/chapter/chapter-1-2/* (Last accessed 7 June 2021).

Trehan, S, Sanzgiri, J, Li, C, Wang, R and **Joshi, RM.** 2017. Critical discussions on the Massive Open Online Course (MOOC) in India and China. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 13(2): 141–165. Available at: *https://files.eric.ed.gov/fulltext/EJ1153318.pdf*.

Van de Poël, J and **Verpoorten, D.** 2019. Designing a MOOC: A new channel for teacher professional development? In: Calise, M, Kloos, CD, Reich, J, Ruiperez-Valiente, JA and Wirsing, M (eds.), *Digital Education: At the MOOC crossroads where the interests of academia and business converge*. Springer. 91–101. DOI: *https://doi.org/10.1007/978-3-030-19875-6_11*

Vivian, R, Falkner, K and **Falkner, N.** 2014. Addressing the challenges of a new digital technologies curriculum. *Research in Learning Technology*, 22(1063519). DOI: *https://doi.org/10.3402/rlt.v22.24691*

Wambugu, PW. 2018. Massive open online courses (MOOCs) for professional teacher and teacher educator development. *Universal Journal of Educational Research*, 6(6): 1153–1157. DOI: *https://doi.org/10.13189/ujer.2018.060604*

Williamson, B, Eynon, R and **Potter, J.** 2020. Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2): 107–114. DOI: *https://doi.org/10.1080/17439884.2020.1761641*

Williamson, B, Macgilchrist, F and **Potter, J.** 2021. Covid-19 controversies and critical research in digital education. *Learning, Media and Technology*, 46(2): 117–127. DOI: *https://doi.org/10.1080/17439884.2021.1922437*

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