



Instructors' perspectives in design and L-MOOCs: A qualitative look

Cristina Diordieva ^{1*}

 0000-0002-7570-4454

Curtis J. Bonk ²

 0000-0002-6365-9502

¹ Nanyang Technological University, SINGAPORE

² Instructional Systems Technology Department, School of Education, Indiana University, Bloomington, IN, USA

* Corresponding author: dr.cristinadiordieva@gmail.com

Citation: Diordieva, C., & Bonk, C. J. (2023). Instructors' perspectives in design and L-MOOCs: A qualitative look. *Contemporary Educational Technology*, 15(3), ep425. <https://doi.org/10.30935/cedtech/13099>

ARTICLE INFO

Received: 29 Dec 2022

Accepted: 14 Mar 2023

ABSTRACT

This qualitative phenomenological study investigates international instructors' perspectives and experiences in designing a successful language-based massive open online course (L-MOOC). Detailed information was gathered during Summer 2018 about the instructor's challenges and strategies through semi-structured interviews with seven participants in six different countries: Ireland, Italy, Norway, Spain, the United Kingdom, and the United States. The findings indicated that curating and facilitating a learning environment with a design team helps create an efficient L-MOOC delivery. Additionally, having multiple moderators per course and using forums helps with monitoring learners' progress. Moreover, according to these seven L-MOOC instructors, having a course platform with rigid structures prevents using multiple activities and assessment tools for language learning. Interviewees argued that it is important to implement a learner-centered approach in L-MOOC, where learners can interact with each other and construct their knowledge. Future research studies may include exploring L-MOOC to address the best instructional practices and contribute to expanding research in language education in massive open online course environment.

Keywords: language-based massive open online courses, online language learning, learner-centered approach, instructors' perspectives, qualitative approach

INTRODUCTION

Massive open online courses (MOOCs) are an educational opportunity that permits an enormous number of learners worldwide to participate in a single learning experience on a common platform, such as Coursera, FutureLearn, and edX (e.g., Bonk et al., 2015, 2018; Stracke, 2017; Stracke et al., 2023; Zhang et al., 2020). MOOCs have been envisioned as a way to increase access to education and help to democratize it. Compared to closed online courses, MOOCs generally have more diverse participants in terms of their backgrounds, ages, cultures, identities, readiness, and language proficiencies (Jasnani, 2013; Lu et al., 2020). Additionally, research on inclusive MOOCs reveals that instructors should consider the main design strategies and challenges encountered in online learning as well as the specific challenges in MOOCs (Bonk et al., 2018); among the major challenges is the large number of students from different ages, cultures, languages, backgrounds, and motivational situations (e.g., Anderson et al., 2013; Zhu et al., 2021). Suffice to say, MOOCs place significant demands on instructors who strive to find and utilize the most effective and engaging instructional strategies for their students.

This study is derived from the EdD project of the first author.

MOOCs exist for thousands of courses such as data analysis and statistics, professional development of teachers, creative writing, career development, food production, Egyptian culture, and so on. More specifically, foreign languages are becoming a relatively popular area of this vast field. A language-based massive open online course (L-MOOC) is a mechanism for delivering language-based instruction that includes a broader set of communication tools contributing to language learning. For instance, an L-MOOC might include tools and features that provide instructional videos to supplement the languages and cultures being acquired as well as the assessment tools that correspond to students' abilities and goals (Sokolik, 2014). The coming decade will see more such tools and language learning options emerge.

Of course, typically, MOOC instructors are required to use a general MOOC platform, where they can design and deliver their L-MOOCs or language-oriented MOOCs by using available tools for language learners to meet their goals. L-MOOC is an opportunity to acknowledge the importance of language education through a variety of ways to engage with words and cultures around the world (Martín-Monje & Bárcena, 2015). Bárcena et al. (2014) describe L-MOOCs as having "enormous potential for rich, flexible, and attractive [to learners] collaborative learning and social interaction." These researchers advocate L-MOOCs as part of the answer to the world's "huge economic unbalance." In addition, they suggest that such MOOCs related to language learning could enhance "access opportunities to both formal language training and the diverse communicative scenarios that enhance the development of language competences" across populations (p. 11). Importantly, they could address the need for skill-based language learning practiced with other learners in a collaborative way (Bárcena et al., 2014). In effect, L-MOOCs are an opportunity to appreciate and promote the value of language education through an L-MOOC. In addition, they can address the demand for collaborative, skill-based language learning.

An L-MOOC platform in general has some instructional, delivery, and technical challenges for the instructors when it comes to choosing the most appropriate instructional strategies to deliver language teaching and learning more effectively in such a dynamic environment (Martín-Monje et al., 2017; Rocha, 2018). However, few, if any, studies (e.g., Rocha, 2018) have addressed the need for exploring instructors' perceptions in terms of their challenges and strategies while designing or delivering in an L-MOOC environment.

Therefore, it is imperative to conduct such a study that will obtain insights into L-MOOC instructor perspectives and practices and identify the main challenges and strategies instructors experienced while designing L-MOOC.

This study investigates one research question with two sub-questions:

1. What do instructors from various countries experience during the design of L-MOOCs?
 - a. What challenges do instructors experience in designing their L-MOOCs?
 - b. What strategies do instructors use for designing their L-MOOCs?

LITERATURE REVIEW

Language-Based Massive Open Online Courses

As new technologies and MOOC features have emerged during the past decade (Bonk, 2020; Bonk et al., 2015; Bonk & Wiley, 2020; Diordieva, 2020; Zhang et al., 2020), L-MOOCs have continued to evolve as a means to provide unlimited participation and access for learning a foreign language at no cost (Bárcena et al., 2014). As a result of this evolution, L-MOOCs are an innovation that has garnered increasing attention from language education researchers (Martín-Monje & Bárcena, 2015). No doubt the coming decade will see an increase in research on L-MOOCs.

According to Bárcena and Martín-Monje (2014), language should be practiced verbally, that way learners acquire certain language skills, such as receptive, productive, and interactive skills in their chosen language; so, too, should L-MOOCs offer such language practice tools and engaging pedagogical activities. Additionally, L-MOOC activities should engage language learners in higher order thinking skills, such as justifying, criticizing, relating, and comparing during learning a second language (Daud, 2018). A study of Ding and Shen (2021) suggested that a shift in educational philosophy may need to occur simultaneously with, or at least after, a

change in pedagogical innovation brought on by technological advancements in language learning. Studying such a shift in instructor's teaching philosophy is a ripe area for educational research and experimentation.

It is believed that a well-designed L-MOOC with a variety of interesting materials and assignments to encourage more interactive learning that are sensitive to the particular learner demands in various contexts could well improve learner involvement. In a study of Jitpaisarnwattana et al. (2022), peer learning, personalization, social contact, course design, and learning assistance were seen as L-MOOC affordances by MOOC learners, whereas lack of proficiency, lack of affinity, low quality course design, and lack of teacher presence were perceived as learning limits. The results of that study show how L-MOOC activity system is dynamic and complex and can simultaneously entail aspects of personalized learning and peer-based or group-related learning (Jitpaisarnwattana et al., 2022). Importantly, that particular study shed light on how learners engage with peers and with various system components in an L-MOOC to learn a language.

Statistically, the language courses for the beginner level are more dominant among other levels in L-MOOC offerings. The fact that there are more language courses offered for beginner level rather than advanced level stems from the fact that more people require basic language skills for their job opportunities. However, learning a language offers myriad opportunities besides employment including enhanced opportunities for citizenship and human identity through social communities (Wenger, 1998). Therefore, increasing L-MOOCs offerings not only provide learners professional growth opportunities but can allow them a chance to explore and reflect upon their potential roles in society and broader impact of the skills that they are acquiring.

cMOOCs and xMOOCs in L-MOOCs

MOOCs have a short history. They came into existence in 2008 (Bonk, Lee et al., 2018; Bonk et al., 2020; Diordieva, 2020). During the initial years of MOOCs, researchers began to differentiate between cMOOC and xMOOC instructional approaches (Cormier & Siemens, 2010; Siemens, 2005). Basically, an xMOOC refers to a more traditional instructional approach with content delivered followed by an assessment, whereas a cMOOC stands for a connectivistic approach wherein a community of learners support each other's learning in whatever direction an individual learner or group of learners determines to be of value or importance. Simply put, xMOOCs employ similar activities and formats of traditional conventional courses and can be managed by a set of prescriptions or preset curricula. xMOOCs provide an advantage in an institutional environment where the raw materials of L-MOOC already exist (Brennan, 2013). In effect, xMOOCs are often simultaneously employed with the same pedagogies as face-to-face courses (Toven-Lindsey et al., 2015). Of course, the pedagogical approaches that work most effectively in MOOCs are not completely understood due to their fairly recent development.

The pedagogies underlying cMOOCs are also in the early stages of understanding. In contrast to xMOOCs, cMOOCs are more aligned with learner-centered and constructivist approaches (Wang et al., 2017). The emerging roles of MOOC instructor were identified by actions involved, such as guiding learners to the readings and resources through constant social sense-making, supporting learners' critical thinking, filtering the content, and being present continuously throughout the course (Cormier & Siemens, 2010). In the connectivist learning approach of cMOOCs, there are multiple connections between learning participants and pathways to learning (Bonk, Lee et al., 2018; Downes, 2019). As a result, learning is an ongoing process. Similarly, Wei et al. (2018) stated that the presence of the instructor built a sense of belonging where participants and facilitators felt more confident and participated more fully in the online discourse. The predominant characteristic of the instructor in a cMOOC is a moderator or co-learner in the discussion (Rodriguez, 2012). Sokolik (2014) explains that instructor presence is mandatory for building a sense of community in cMOOCs, whereas xMOOCs tend not to offer the same opportunity for participants to interact, collaborate, and, in effect, be noticed.

Various studies have found that the connectivist approach is often not implemented purely or alone in a language learning process. For instance, Godwin-Jones (2014) argues that combining cMOOCs and xMOOCs creates a highly adaptive learning system within an engaging social and personalizable structure through an intertwining of "machine learning and social learning" that is optimal for L-MOOCs. Overall, for L-MOOC designers it is important to use cMOOC and xMOOC approaches to provide flexibility for learning delivery by incorporating the best methods from each (Bárcena et al., 2015).

Few studies have discussed challenges that instructors encounter for the design of their L-MOOCs. According to Qian and Bax (2017), challenges and opportunities for L-MOOC instructors relate to the improvement of social learning by employing a wide variety of activities and tools, which promote conversation and collaboration between learners. Motzo and Proudfoot (2017) also claimed that switching from instructor-centered to a social constructivist-based learning environment, a language course designer encounters additional challenges and opportunities. Although moving from instructor-oriented approach to a social-constructivist learning approach can be challenging, it provides more opportunities for L-MOOC designers to embed socially engaging activities, and, as a result, enhance learning.

Interaction in L-MOOCs

Interaction plays an important role in learning a foreign language. Multiple teaching assistants are often needed to create successful learner-instructor interactions (Hew & Cheung, 2014). Due to the massiveness of MOOC platform, there are myriad opportunities for interactions that the Internet network provides. However, having too many interactions can be overwhelming for learners. Alario-Hoyos et al. (2014) claim that excessive information can exhaust learners when a large number of peers by communicating through several tools. In fact, their study showed that learners were active on different communication tools. As such, Alario-Hoyos et al. (2014) suggested the provision of several social media platforms for communication purposes for their learners without feeling obligated to use a certain tool. However, using multiple tools does not assure a consistently high quality of interaction (Hew & Cheung, 2014). The overall findings of Alario-Hoyos et al. (2014) revealed the importance of maintaining the balance of choice and opportunities that a MOOC platform provides so that the learners' needs and preferences are being supported with guidance and high quality. Therefore, instructional designers should choose and design cautiously according to the learners' needs and provide substantial guidance to learners who may need help.

Forums are one of the main sources of interaction that are often included in online second language learning (Chen et al., 2016; Scott & Beadle, 2014; Sharif & Magrill, 2015). Providing feedback through forums allows the teacher to follow up on learner's progress through the use of language. Forums have also been proven beneficial for L-MOOC learners to practice the target language by focusing on its structure and application, as well as the context in which it can be used (Martín-Monje & Bárcena, 2015). Bárcena et al. (2015) discuss the importance of forums in L-MOOCs. Bárcena et al. (2015) crafted activities that targeted the improvement of collaborative learning by implementing forums and peer-to-peer activities. Importantly, as their results highlighted, forums were effective in supporting collaborative language learning. Beaven et al. (2014) explain the effectiveness of forums by relating their use to an authentic approach; in effect, they are akin to a start-up of a conversation during the course. According to Beaven et al. (2014), forums create an authentic and meaningful learning environment for students to accomplish their learning tasks. This authenticity is seen when learners access the forums in a mobile fashion and contribute to them; L-MOOCs are particularly well suited to mobile environments (Read & Barcena, 2015), where learners contribute to the discussion anywhere and anytime they wish. With that being said, the importance of forums has been discussed by many researchers and remain one of the main components of online learning platforms.

Delivery of MOOCs

There have been documented issues with MOOC delivery. For instance, Morrison (2013) explains that collaborative tools that are outside of the platform create technical problems. In terms of the design of asynchronous tools, such as discussion forums, there should be a clear structure without multiple threaded conversations where language learners could encounter difficulties (Swaffar, 1998). For instance, Castrillo (2014) suggests a logical distribution of topics for a forum designed with categories, subcategories, and conversation threads for language learners.

Another problem concerning MOOC delivery often discussed in the literature concerns auto-grading or having multiple-choice quizzes as an assessment type, in particular in xMOOCs. Reliance on such objective assessments limits opportunities for MOOC learners to write extended prose and engage in higher order thinking. Consequently, learners typically do not have a direct connection with their MOOC instructors and rarely, if ever, obtain feedback about their actual learning progress. This problem was also emphasized by Mahraj (2012) who stated that lecture-based instruction is often a "sage on the stage" approach and limits

Table 1. Participants' demographic information

IDs (anonymous)	Gender (F/M)	Country	L-MOOC		
			Taught	Level	Teaching experience
Participant 1 (Danny)	M	UK	English	Beginner, intermediate, & advanced	4 years
Participant 2 (Luciano)	M	Italy	Italian	Beginner	3 years
Participant 3 (Sophia)	F	UK	Spanish	Advanced	2 years
Participant 4 (Andrew)	M	Norway	Norwegian	Beginner, intermediate, & advanced	1 year
Participant 5 (Maria)	F	Ireland	English	Advanced	1 year
Participant 6 (Anna)	F	USA	Chinese	Beginner	3 years
Participant 7 (Mira)	F	Spain	English	Beginner, intermediate, & advanced	6 years

possibilities for more efficient and effective instructional design (p. 363). Mahraj advocated for following instructional design practices that allow for creativity, discussion, collaboration, ability, and problem-solving skills.

Little is known about how L-MOOC educators could handle the challenges in light of their educational goals. According to current research, failing to pay attention to how educators think about their instructional practices in online environments reduces the value of research in guiding future action (Turvey & Pachler, 2020). In order to see how the instructors around the globe feel about preparing, delivering, and researching L-MOOCs, there is a need for conducting more qualitative research studies that rely mainly on their primary views, challenges, and recommendations for language instructors in MOOCs. Given the relative newness of the field of MOOCs and, in particular, L-MOOCs, innovative research on the practices, challenges, and strategies of novice language instructors in different MOOC platforms and levels of language learning stands to enrich the language education field.

METHOD

This qualitative research study implements a phenomenological approach to explore instructors' views of the challenges and strategies implemented in L-MOOC instruction across the world. The qualitative method was used to code, systematize, and register the findings for identifying the meaning behind different terminology used by instructors for similar instructional tools (Merriam, 2009). A phenomenological approach was used to conduct research and collect data to explore instructor's shared experiences while designing and delivering an L-MOOC; importantly, through such an approach, significant research questions can effectively be addressed.

Participants

The participants were chosen from a purposive sampling of a MOOC instructor database. They each had at least one year of teaching and designing experience in an L-MOOC platform. There were seven instructors (out of 38 L-MOOCs in the database) who agreed to participate in the study upon approval of the Institutional Review Board (IRB). Participant identities were anonymized to keep their confidentiality (i.e., Danny stands for participant 1 and so forth). **Table 1** provides participant demographic information.

Instrumentation

A semi-structured interview protocol with 22 questions was created by consulting with four subject experts in MOOCs and online language teaching. As pointed out by Galletta (2013), a semi-structured interview encourages participants to express their ideas, experiences, needs, and attitudes and allows for greater flexibility in the question order and follow-up.

With the agreement of the participants, the interviews were audio-taped to help with transcription and data analysis. Besides interviews, document artifacts (e.g., lessons, audio captures, and syllabi) were used to help in validating the data. In effect, the researchers double-checked that the instructors provided accurate information about their course structure and to gain a deeper understanding of MOOC environments that these instructors had designed.

Data Collection Procedures

Following Seidman (2012), the role of interviewing is designed to ask questions to reconstruct the participants' experiences and explore their meaning. Without a goal or a framework that allows them to carry out the interview objective, researchers have little to base their decisions on when they enter an interview context. Without a well-thought-out structure for their work, they run a higher risk of misrepresenting the information they collect from their participants and of forcing their own worldview on them rather than discovering theirs.

The interviews began with a brief description of why the participant was selected, the voluntary participation of their participation, confidentiality, and the purpose of the study. The primary questions concerned the teaching background and experiences in L-MOOCs. These interviews took approximately 30 to 45 minutes. During the interviews, each participant was asked the same questions to assure the information gathered adequately addressed the proposed research questions (Kvale, 2007).

Data Analysis

An in vivo or "literal" coding was used by the researcher as a practical method of coding followed by the inductive approach (Saldana, 2012). This type of coding practical approach was used to identify the actual spoken words of the participants by giving meaning to the data. Also, in vivo helps to structure the researcher's interpretations of participants' everyday language use into an academic terminology (Saldana, 2012).

The data were analyzed manually using the methods described by Moustakas (1994). Specifically, the following five specific steps were used to analyze the data in detail as suggested by Moustakas (1994):

1. Horizontalization—the researchers noted all the possible statements relating to the participants' experiences and that answer the research questions.
2. Reduction and elimination—the researchers reviewed the listing of horizons for each participant to make sure that no repetitive statements were made. Importantly, the researchers took steps to minimize personal bias throughout the data analysis process.
3. Individual textural description—the researchers described and explored each individual's essence of the experience; the textural descriptions provided information including the quotes about what experiences the instructors stated.
4. Composite textural description—the researchers needed to return to the individual textural descriptions and identify the common themes experienced by the participants. Each participant's textural description was combined to create a synopsis of the experiences.
5. Composite structural and textural description—the researchers created a composite description using all the participants' textural and structural descriptions that captured shared experiences and the essence of the phenomena under study.

Trustworthiness

The trustworthiness of a study is built from employing certain techniques, such as audit trail and ethical assurances. Suggested by Lincoln and Guba (1985), an audit trail implies a thorough description of the whole research process. The main goal of using an audit trail in this study is to review every process and procedure and to ensure that the research was properly conducted.

Meanwhile, ethical assurance, such as providing an informed consent letter, utilizing pseudonyms, and keeping records in a password-protected computer for each participant was used in order to maintain the privacy and confidentiality of the information gathered.

FINDINGS

After transcribing and analyzing the data, two major themes with two sub-themes emerged. The themes and sub-themes are organized in **Figure 1** according to each sub-research question.

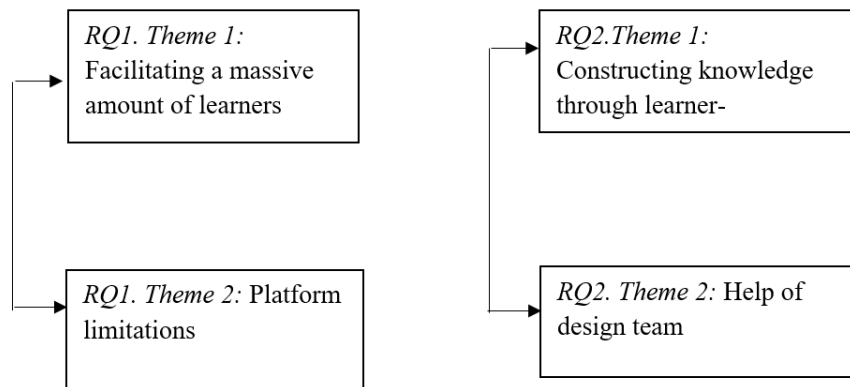


Figure 1. Emerged themes (Source: Authors)

RQ1. Theme 1: Facilitating a Massive Amount of Learners

Most of the participants experienced challenges in terms of maintaining effective communication and including everyone in MOOC platform. For instance, Danny discussed his challenge in including and commenting on the learners' writing and other tasks completed. He stated "... I think that is challenging to ask people to give comments on other people's writing." Also, as he noted, inclusiveness is important to him, as follows, "Every step of the course is for every learner, so if you are asking [a] question that exclude[s] anyone, then you are asking a wrong question."

Luciano was challenged by the diversity of the learners. For him, when initially designing the course, teaching via an open online class to the masses sounded impossible. He explained, "[It is] quite impossible to teach language to more than fifty thousand people ..., running the same course without [the] possibility to speak face-to-face with them ..., for me, these kinds of things were not the obstacles, but challenges."

Sophia experienced challenges in how to make choices in delivering the material to everyone given a large number of learners. She explained, "We could not [reach] everybody and you have to explain it, students wanted at first feedback, which is obviously not possible with fifty-five thousand people."

Maria explains her challenge in delivering an L-MOOC to a massive number of learners compared to a more traditional online course. She stated, "Thousands of students from very very diverse backgrounds, ... the design of different steps of MOOC[s] have to be sorted in completely different way[s] comparing to other online courses."

Anna had challenges about the learners' competencies such as those related to standard language use and computer communication. In terms of the learners, she claimed that,

"... [language] not standard enough. I was also concerned about my learners on MOOC, it is a lot of different people from a lot of places, backgrounds, and you do not know if they know how to study or if they know how to use a computer properly."

The common challenges among the participants were related to dealing with a massive number of diverse learners and, more specifically, to maintain effective communication with diverse learners in the process of language acquisition.

RQ1. Theme 2: Platform Limitations

One of the challenges that participants experienced in MOOC platform relates to structural and functional limitations. One of the participants encountered a challenge in re-designing the course due to the changing policies related to the platform. Specifically, for Luciano, the developers of MOOC platform suggested the introduction of more exercises and payment for each test. He mentioned that "We changed something from the first edition of our MOOC, ... and some changes are proposed by [the platform] in accordance with their policy" and "if you want to test yourself on a special aspect of Italian language you have to pay to do this." Andrew commented on how to design activities that were relevant for teaching a language. He indicated that,

"We have limitations to what kind of grammar exercises we can design, we could have had great variety of exercises, but it's been difficult so far because [sic] MOOC platform is not really designed for [a] language MOOC."

Maria discussed the need for more learner-based activities than MOOC platform can provide. It was difficult for her to design a course when there are many platform limitations. She hoped for more technology-based tools in the future. For example, Maria noted that with MOOCs,

"You face the reality of rigid structure of the platform ..., a lot of things that you have in mind to do you cannot actually do..., the policies of the platform would not allow, that restricted the choice of the student-based activities that we could introduce in MOOC."

Anna had challenges designing a course when producing a certain amount of video and quiz time required by MOOC platform. She further noted, "[The platform] has a structure and you have to follow that, so you have to make a certain number of videos, you have to make quizzes for all of your videos."

Anna also found designing the structure of the course to be compatible with the requirement of the platform is challenging. Additionally, she mentioned that MOOC platform does not have enough learner assessment options, stating, "The only type of assessment you can really use on [platform] is multiple choice."

Mira provided another example of how the limitations of MOOC platform do not support certain learning activities. For instance, he stated, "MOOC [platform] did not support many activities that we had planned, so we had to change everything to quizzes or find ways around it, that was the most challenging part."

All the above participants indicated that the rigid structures of the course due to MOOC restricted policies created limited learning activities and led to fewer open resources for learning a language online. All seven L-MOOC instructors had challenges in designing a course while producing a certain number of activities in a limited time. Additionally, the participants considered the assessment tools options that the platform had to offer inefficient and insufficient for evaluating learners' knowledge.

RQ2. Theme 1: Constructing Knowledge Through Learner-Centeredness

One of the main approaches that participants in this study used in their MOOC is the learner-centered approach. They believed that this approach helped learners to learn more effectively and also fostered a sharing of the learning experience. Danny discussed the importance of social learning in educating people from different cultures. He mentioned that "The design was built on the principle of social learning, that we the educators that facilitate this and will not be [the] only source of knowledge."

Sophia encouraged her learners to be active in the learning process throughout the course. She mentioned that "We are very much encouraging students, ... where students learn together, share the information and in this sense, they construct the learning materials and the feedback [to their peers] as well." Meanwhile, Andrew also encouraged the learners to be actively involved through social support. He stated that, "They [learners] should support each other more than we [are]." For Andrew, preparing the learning materials in advance assures learners' independency throughout the course. For example, he noted, "We try to design as much as possible [for] students [learners] to be able to follow the grammar, the structure of the course, the design of the course without telling them what to do."

Further, Maria explained that learners should be always at the center, where they can learn from each other. More detailed, she stated, "The idea behind the structure of MOOC was to create, to facilitate learning to learn skills, so the students were always central, they were asked to ... reflect and share their ideas and their experiences [with their peers]."

Meanwhile, Mira also emphasized a learner-centered approach where learners can potentially share their language ability. For instance, she mentioned a type of video activity where each learner needs to upload a video into MOOC platform and then assess each other's work. Per Mira, "Asynchronous oral practice, the students had to record the video, upload it, and then their peers, the course partners would assess that."

While participants' responses advocated for a learner-centered approach, they also mentioned a need for simplicity of the design, so learners could follow the structure of the course without relying too much on the instructor or the instructional design team. The participants were able to employ a learner-centered approach

in their courses by introducing a discussion forum where learners could communicate and learn from each other to construct the knowledge on their own. Overall, most of the participants believed that the learner-centered approach helped in language learning when in a MOOC platform.

RQ2. Theme 2: Help of a Design Team

This theme relates to the instructors' experiences of designing their courses with the help of their design team, which included collaborative work, multiple moderators, and quickness in collaboration. The participants felt more confident in having the design team to create their course. In the beginning, it was challenging for all participants to design the course for a large number of people. That is why they stressed that it takes considerable time as a designer to make the course available to a wide range of potential L-MOOC learners.

For Luciano, designing the course was a momentous step before teaching; and, as expected, it was quite challenging. He also preferred to create a variety of exercises with the help of his design team at his university. As Luciano stated, "when we start to think of this MOOC, we think how to solve this problem and we decide to create groups inside the same MOOC."

For Andrew, preparing a simple design was highly important for a course to run efficiently. In this case, the design team prepared everything in advance to assure that students would have minimal, if any, issues accessing the course. As an example, he stated, "we try to design as much as possible [for] students to be able to follow the grammar, the structure of the course, the design of the course without telling them what to do." Furthermore, for Maria, the design team was also extremely vital for creating certain activities. For instance, she stated that, "I was part of the design team, and then I also created certain activities, we shared the weeks and then upload to them." In addition, as seen in the following quote, she claimed that there were different roles for each member of the same team, "I found the roles are often mixed, and the design, the content creator, they are very often the same person, the same team of people."

Anna also claimed that different roles are involved in the design team. She stated her collaborative work with the team, she stated "I had a couple of students who worked with me..., it just depends on if you have a team and each person has assigned a duty."

Limitations of the Study

There are several limitations of the study to point out. First, this study relies solely on interviews obtained from instructors, and, therefore, it assumes that they were honest in responding to the questions. Second, additional documents and data on course organization, such as forums and feedback, were limited or unavailable during this study. Computer log data and an in-depth content analysis would likely have provided key supplemental data.

DISCUSSION

One of the most important parts in designing an efficient language learning MOOC is the consideration of diverse students' needs when joining such a MOOC. In this study, the main challenge encountered by the participants was balancing inclusion with maintaining effective communication among numerous learners. Given the large numbers of learners in MOOC courses, it is almost impossible to reach out to all the learners and oversee their learning progress. The participants all experienced the challenge that instructors and instructional designers faced in striving to be as inclusive as possible and maintaining equity among learners. Dealing with an enormous number of learners is possible through online discussion forums that help in guiding and following the learners' progress.

Due to the constraints of MOOC platform, designing the course is not fully controlled by the instructors who prepare the course. Therefore, the instructors expressed the frustration of being restricted to a limited number of activities. Most complained about attempting to design an effective and engaging course while being forced to produce a certain number of activities in a limited amount of time. They also considered the assessment tools options that the platform had to offer inefficient and insufficient for evaluating learners' knowledge. Additional research on innovative assessment tools might advance the assessment options as well as enhance the understanding of the acquisition of a foreign language through MOOC platform. Childs

and Soetanto (2017) documented several limitations of MOOC platforms. For instance, a particular MOOC platform designed for a diverse population of learners has constraints in terms of the number of weeks for which an instructor can offer a course, hours of study MOOC learners must engage in, and the number of activities embedded in the course.

Findings pertaining to challenges related to designing an L-MOOC contrast with some of the prevailing literature on best practices. Current literature reflects the importance of using a constructivist approach that will enable learners to be better engaged in the process of learning and construct new knowledge based on their ability (Ferguson & Sharples, 2014; Liu et al., 2020, Sheppard, 2020). Participants felt that a MOOC platform designed for learners where they can construct knowledge on their own through constant sharing and helping each other is highly vital. Fortunately, most of the participants acknowledged that their L-MOOC supported the social learning process.

In terms of the design strategies, instructors felt more confident in implementing a learner-centered approach. The term of learner-centered approach in the literature is commonly used with other terms, such as learning-centered teaching or student-centered learning. Stewart et al. (2012) explained that learners should be active in the process of learning and cooperate while they discuss, read, solve problems, analyze, evaluate, and integrate knowledge. Consequently, the new role of the instructor becomes one of facilitating the course and training the learners on the course components such as the tools, resources, and activities, as well as highlighting the possible pathways to success.

Meanwhile, learners should contribute to the knowledge by being active listeners. Some authors (Blumberg, 2009; Butler et al., 2021) note that learner retention and their readiness to graduate depends on applying the learner-centered approach rather than traditional lecturing. The learner-centered approach is an opportunity to create “learning activities that are internally driven and constructed, goal-oriented and reflective, personally meaningful and authentic, collaborative and socially negotiated, and adaptive to individual needs and cultural backgrounds” (Wenger, 1998, p. 30).

According to research on the affordances of MOOCs for enabling learner-centered experiences, the immense scale and openness of MOOCs enhance both the opportunities and constraints encountered by teachers (Bonk et al., 2015, Bonk, Lee et al., 2018, Bonk, Zhang et al., 2020; Diordieva, 2020; Zhang et al., 2020). Research also shows that the online medium can reach a greater number and diversity of learners (Walji et al., 2016), create more space for learners to pursue their own goals and interests (Littlejohn & Hood, 2018), and facilitate participants learning from one another, with access to a greater diversity of experiences and perspectives, all have empirical support (Ferguson & Sharples, 2014).

Also, Askeroth and Richardson (2019) discovered that instructors believe that excellent learning can occur in a MOOC and that social constructivism and self-regulated learning strategies are frequently used to achieve this. Students completing the course’s intended objectives, as well as discussions, collaborations, and interactions, were all regarded as examples of high-quality learning in MOOCs. Furthermore, the tendency towards a more constructivist learning approach in MOOCs is clearly displayed in participants’ statements, although they did not use the term. Overall, the social learning opportunities in a MOOC platform helps learners to stay active throughout the course.

As revealed in many of our interviews, MOOCs are time intensive to create and require more than just a single instructor. Not surprisingly, a theme discussed by several participants when they are asked how they handle such an enormous amount of people from the platform is that a design team is typically required to design and deliver a MOOC. One of the participants estimated that the amount of time required for preparing a course was “at least six months.” It is not easy for a lone instructor to design a course for such a diverse environment; a team is needed. The importance of design teams in MOOCs has been rarely discussed in the literature. Dennen and Bong’s (2015) study aimed to show the importance of how a design team works before and while delivering MOOC. The design process was accompanied by a team of 16 people. MOOC instructors that we interviewed described that having extensive teaching experience (in some cases over 20 years) allowed them to initiate a design plan for the structure and development of the course. Making all the content available for the course (e.g., modules, schedules, assessments, syllabus, etc.) took months of instructional design time and resources. A six-week course needed to have each module with adequate media components

and assessment types. For example, each module contained video lectures, a webinar, readings, discussion activities, a quiz, and a final task.

Before uploading a final version of the course modules, an agreement for the quality assurance check typically was provided. Most often, the lead designers created a plan for other team designers to name different tasks related to the technical supporter and the grader. This plan was highly flexible and enabled instructional designers to be involved in different tasks and be able to provide information and answers to active participants in MOOC. The interactions and connections between instructors and participants were possible by forming teams with different tasks. Each task to which the instructional designers belonged was necessary to obtain and maintain quality for the course design and delivery. Plus, providing instructors with better support in terms of having additional professional supporters (e.g., technicians, course designers, tutors, etc.) in MOOC platform helped to assure higher quality of instruction and achievement of the learning objectives (Gil-Jaurena & Domínguez, 2018).

Given the emphasis of establishing a MOOC design team, the instructor often had multiple roles while designing or delivering a MOOC (Dennen & Bong, 2015). Consequently, the findings relate to the importance of having multiple instructors or co-instructors per MOOC where a large number of people received adequate instructional support, feedback, and overall high quality learning experience.

This study reveals many unique design experiences of L-MOOC instructors. The findings clearly indicate that there is a need for further investigation and research regarding this open online teaching experience for language learning.

CONCLUSION

This study offers suggestions for instructors to help advance language instruction in L-MOOCs and expand the inclusiveness of learners' experiences. The overall findings of this study revealed the importance of improving L-MOOC learning environment with active and collaborative instructional strategies (e.g., learner-centered approach). From instructors' perspective, acting as curator and facilitator is important throughout the course design and delivery with the help of a team of assistants. Instructional assistants can help guide the learners and expand the course to large audiences and to assure that learners remain active and motivated during the course. Also, implementing a constructivist learning approach along with collaborative tools, such as discussion forums, shows the support in learner engagement, progress, and collaborative work.

It is critical that students have a choice of acquiring the requisite knowledge independently, following a self-paced learning approach, which they control while, along the way, using discussion boards to generate extensive reflection, interaction, and assessment processes. To follow a learner-centered approach, there is a need in the simplicity of the design, so learners can follow the structure of the course without requiring too much assistance or scaffolding from L-MOOC instructors. At the same time, other findings suggest that re-designing the course due to the changing policies related to MOOC platform may be challenging for the instructors. Plus, the assessment tools options that the platform offered were typically deemed inefficient and insufficient for evaluating learners' knowledge.

Clearly, as the seven L-MOOC instructors interviewed in this study indicated there are myriad issues and challenges that must be addressed before institutions and instructors can feel confident of success when offering MOOCs. This evidently indicates a chain of potential research foci in L-MOOC research camp.

Practical Recommendations and Future Research

The findings of this study suggest that L-MOOC learners may be guided by instructional assistants or aids, which can help the course reach a larger audience. Importantly, applying a constructivist learning method, as well as collaborative resources like forums, may help learners to be more engaged in the language learning process and obtain timely and informative feedback from experts and peers. A learner-centered approach, which allows learners to develop information on their own, is a vital tactic for designing an effective L-MOOC. Yet, it is essential to have multiple choices for assessing the learning process in such a large and diversified environment.

As learning increasingly has been shifted to online and blended environments, especially free, open, and massive ones, researching innovative tools and pedagogical practices for language learning in an L-MOOC environment is increasingly crucial. When there is a worldwide pandemic, such online learning becomes even more critical.

Further investigations are needed to examine whether students' motivation and performance has a direct link with instructional guidance and feedback offered in L-MOOC settings. Future studies are needed to address the questions below that were generated based on the findings of the current study: How do the simplicity of the course design influence the efficacy of the learner-centered approach? Do MOOC platforms offer suitable instructional design tools for language learning and assessment? How do changing policies of MOOC platform affect the efficacy of the course design and delivery? As indicated, future studies are now needed to help the field of language learning take greater advantage of MOOCs and other forms of open and free access tools.

Overall, additional empirical studies are needed to focus on the most effective tools, features, and activities that MOOC platforms currently do not, or cannot, provide. To address the rigid structure of most MOOC platforms in existence today, innovative pedagogical activities for online language learning in such large-scale classes are vitally needed. While such innovations are limited by the tools and training available today as well as conventional educational policies and procedures, MOOC pioneers, educational technology leaders, and creative language learning researchers and educators could coalesce their skills and initiatives to map the next advancements in language learning from MOOCs and MOOC-like derivatives. Moreover, additional research on innovative assessment tools might help advance the assessment options as well as enhance the understanding of the acquisition of a foreign language through a MOOC platform. Lastly, since this study did not involve learners and instructional designers' perspectives, there is a need to conduct more studies like that to draw a broader picture of what challenges may be encountered and what other strategies may be utilized for a successful L-MOOC delivery.

Author contributions: **CD:** wrote the manuscript & methodology, did formal analysis, wrote revisions, edited the manuscript, & performed conceptualization & **CB:** supervision, provided writing, editing, & proofreading. All authors approved the final version of the article.

Funding: The authors received no financial support for the research and/or authorship of this article.

Ethics declaration: Authors declared that all ethical issues, including informed consent and confidentiality were enforced. The study was approved by the institutional ethics committee of Texas Tech University on May 17th, 2018 (IRB2018-100).

Declaration of interest: Authors declare no competing interest.

Data availability: Data generated or analyzed during this study are available from the authors on request.

REFERENCES

- Alario-Hoyos, C., Pérez-Sanagustín, M., Delgado-Kloos, C., & Muñoz-Organero, M. (2014). Delving into participants' profiles and use of social tools in MOOCs. *IEEE Transactions on Learning Technologies*, 7(3), 260-266. <https://doi.org/10.1109/TLT.2014.2311807>
- Anderson, S., Collier, A., & Horii, C. V. (2013). Designing and implementing MOOCs to maximize student learning. *EDUCAUSE*. <https://events.educause.edu/eli/focus-sessions/2013/eli-2013-online-spring-focus-session/proceedings/designing-and-implementing-moocs-that-maximize-student-learning>
- Askeroth, J. H., & Richardson, J. C. (2019). Instructor perceptions of quality learning in MOOCs they teach. *Online Learning*, 23(4), 135-159. <https://doi.org/10.24059/olj.v23i4.2043>
- Bárcena, E., & Martín-Monje, E. (2014). Introduction. Language MOOCs: An emerging field. In E. Martín-Monje, & E. Bárcena (Eds.), *Language MOOCs: Providing learning, transcending boundaries* (pp. 1-15). De Gruyter Open. <https://doi.org/10.2478/9783110420067.1>
- Bárcena, E., Martín-Monje, E., & Read, T. (2015). Potentiating the human dimension in language MOOCs. In *Proceedings of the European Stakeholder Summit* (pp. 46-54).
- Bárcena, E., Read, T., Martín-Monje, E., & Castrillo, M. D. (2014). Analyzing student participation in foreign language MOOCs: A case study. In *Proceedings of the EMOOCs 2014: European MOOCs Stakeholders Summit* (pp. 11-17).

- Beaven, T., Codreanu, T., & Creuzé, A. (2014). Motivation in a language MOOC: Issues for course designers. In E. Martín-Monje, & E. Bárcena (Eds.), *Language MOOCs: Providing learning, transcending boundaries* (pp. 48-66). De Gruyter Open. <https://doi.org/10.2478/9783110420067.4>
- Blumberg, P. (2009). *Developing learner-centered teaching: A practical guide for faculty*. Jossey-Bass.
- Bonk, C. J. (2020). Pandemic ponderings, 30 years to today: Synchronous signals, saviors, or survivors? *Distance Education*, 41(4), 589-599. <https://doi.org/10.1080/01587919.2020.1821610>
- Bonk, C. J., Lee, M. M., Reeves, T. C., & Reynolds, T. H. (Eds.) (2015). *MOOCs and open education around the world*. Routledge.
- Bonk, C. J., Lee, M. M., Reeves, T. C., & Reynolds, T. H. (2018). The emergence and design of massive open online courses. In R. A. Reiser & J. V. Dempsey (Eds.), *Trends and issues in instructional design & technology* (4th Ed., pp. 250-258). Pearson Education.
- Bonk, C. J., & Wiley, D. (2020). Preface: Reflections on the waves of emerging learning technology. *Educational Technology Research and Development*, 68(4), 1595-1612. <https://doi.org/10.1007/s11423-020-09809-x>
- Bonk, C. J., Zhang, K., Reeves, T. C., & Reynolds, T. H. (2020). Preface: MOOCs and open education—Wandering and winding our way to today. In K. Zhang, C. J. Bonk, T. C. Reeves, & T. H. Reynolds, T. H. (Eds.), *MOOCs and open education in the global south: Challenges, successes, and opportunities* (pp. xvi-xxxiii). Routledge.
- Bonk, C. J., Zhu, M., Kim, M., Xu, S., Sabir, N., & Sari, A. R. (2018). Pushing toward a more personalized MOOC: Exploring instructor selected activities, resources, and technologies for MOOC design and implementation: *International Review of Research in Open and Distributed Learning*, 19(4). <https://doi.org/10.19173/irrodl.v19i4.3439>
- Brennan, K. (2013). In connectivism, no one can hear you scream: A guide to understanding the MOOC novice. *Hybrid Pedagogy*. <http://hybridpedagogy.org/in-connectivism-no-one-can-hear-you-scream-a-guide-to-understanding-the-mooc-novice/>
- Butler, Y. G., Peng, X., & Lee, J. (2021). Young learners' voices: Towards a learner-centered approach to understanding language assessment Literacy, *Language Testing*, 38(3), 429-455. <https://doi.org/10.1177/0265532221992274>
- Castrillo de Larreta-Azelain, M. D. (2014). Language teaching in MOOCs: The integral role of the instructor. In E. Martín-Monje & E. Bárcena (Eds.), *Language MOOCs. Providing learning, transcending boundaries* (pp. 67-90). De Gruyter Open. <http://www.degruyter.com/view/product/455678>
- Chen, H., Phang, C. W., Zhang, C., & Cai, S. (2016). *What kinds of forum activities are important for promoting learning continuance in MOOCs?* [Paper presentation]. The Pacific Asia Conference on Information Systems.
- Childs, M., & Soetanto, R. (Eds.). (2017). *Online learning for STEM subjects: International examples of technologies and pedagogies in use*. Routledge. <https://doi.org/10.4324/9781315678009>
- Cormier, D., & Siemens, G. (2010). Through the open door: Open courses as research, learning, and engagement. *Educause Review*, 45(4), 30-39.
- Dennen, V. P., & Bong, J. (2015). Behind the scenes of an independent MOOC: Instructional design problems and solutions. *International Journal for Educational Media and Technology*, 9(1), 25-31.
- Ding, Y., & Shen, H. (2021). English language MOOCs in China: Learners' perspective. *The EuroCALL Review*, 28(2), 13-22. <https://doi.org/10.4995/eurocall.2020.13090>
- Diordieva, C. (2020). *Instructional strategies and challenges for language-based massive open online courses (L-MOOC): An international investigation* [Doctoral dissertation, Texas Tech University].
- Downes, S. (2019). Recent work in connectivism. *European Journal of Open, Distance and E-Learning*, 22(2), 113-132. <https://doi.org/10.2478/eurodl-2019-0014>
- Ferguson, R., & Sharples, M. (2014). Innovative pedagogy at massive scale: Teaching and learning in MOOCs. In C. Rensing, S. de Freitas, T. Ley, & P. J. Muñoz-Merino (Eds.), *Open learning and teaching in educational communities* (pp. 98-111). Springer. https://doi.org/10.1007/978-3-319-11200-8_8
- Galletta, A. (2013). *Mastering the semi-structured interview and beyond: From research design to analysis and publication*. NYU Press. <https://doi.org/10.18574/nyu/9780814732939.001.0001>
- Gil-Jaurena, I., & Domínguez, D. (2018). Teachers' roles in light of massive open online courses (MOOCs): Evolution and challenges in higher distance education. *International Review of Education*, 64(2), 197-219. <https://doi.org/10.1007/s11159-018-9715-0>

- Godwin-Jones, R. (2014). Global reach and local practice: The promise of MOOCs. *Language Learning & Technology, 18*(3), 5-15.
- Hew, K. F., & Cheung, W. S. (2014). Students' and instructors' use of massive open online courses (MOOCs): Motivations and challenges. *Educational Research Review, 12*, 45-58. <https://doi.org/10.1016/j.edurev.2014.05.001>
- Jasnani, P. (2013). *Designing MOOCs: A white paper on instructional design for MOOCs*. http://www.tatainteractive.com/pdf/Designing_MOOCs-A_White_Paper_on_ID_for_MOOCs.pdf
- Jitpaisarnwattana, N., Darasawang, P., & Reinders, H. (2022). Understanding affordances and limitations in a language MOOC from an activity theory perspective. *RPTTEL, 17*, 9. <https://doi.org/10.1186/s41039-022-00186-y>
- Kvale, S. (2007). *Doing interviews*. SAGE. <https://doi.org/10.4135/9781849208963>
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Sage Publications.
- Littlejohn, A., & Hood, N. (2018). *Reconceptualizing learning in the digital age: The [un] democratizing potential of MOOCs*. Springer.
- Liu, Y., Liu, H., Xu, Y., & Lu, H. (2020). Online English reading instruction in the ESL classroom based on constructivism. *Journal of Educational Technology Systems, 48*(4), 539-552. <https://doi.org/10.1177/0047239519899341>
- Lu, X., Liu, X. W., & Zhang, W. (2020). Diversities of learners' interactions in different MOOC courses: How these diversities affects communication in learning. *Computers & Education, 151*, 103873. <https://doi.org/10.1016/j.compedu.2020.103873>
- Mahraj, K. (2012). Using information expertise to enhance massive open online courses. *Public Services Quarterly, 8*(4), 359-368.
- Martín-Monje, E. & Bárcena, E. (Eds.). (2015). *Language MOOCs: Providing learning, transcending boundaries*. De Gruyter Open. <https://doi.org/10.2478/9783110420067>
- Martín-Monje, E., Read, T., & Bárcena, E. (2017). The importance of forum interaction and success rates in language MOOCs. In *Proceedings of EMOCs 2017: Work in Progress. Papers of the Experience and Research Tracks and Position Papers of the Policy Track* (pp. 10-15).
- Mat Daud, N., Mohamad Ali, A., Mat Daud, N., Juhary, J. & Raihanah, M. M. (2018). A MOOC for literature integrated language classroom: Pedagogical suggestions for the development of higher order thinking skills (HOTS). *Arab World English Journal, Special Issue on CALL, 4*. <https://doi.org/10.24093/awej/call4.2>
- Merriam, S. B. (2009). *Qualitative research: A guide to design and interpretation*. Jossey-Bass.
- Morrison, D. (2013). *How NOT to design a MOOC: The disaster at Coursera and how to fix it* [Blog post]. <http://onlinelearninginsights.wordpress.com/2013/02/01/how-not-to-design-a-mooc-the-disaster-at-coursera-and-how-to-fix-it/>
- Motzo, A., & Proudfoot, A. (2017). MOOCs for language learning—opportunities and challenges: The case of the Open University Italian beginners' MOOCs. In K. Qian, & S. Bax (Eds.), *Beyond the language classroom: Researching MOOCs and other innovations* (pp. 85-97). Research-publishing.net. <https://doi.org/10.14705/rpnet.2017.mooc2016.673>
- Moustakas, C. (1994). *Phenomenological research methods*. Sage.
- Qian, K., & Bax, S. (2017). Introduction to beyond the language classroom: Researching MOOCs and other innovations. In K. Qian, & S. Bax (Eds.), *Beyond the language classroom: Researching MOOCs and other innovations* (pp. 1-4). Research-publishing.net. <https://doi.org/10.14705/rpnet.2017.mooc2016.666>
- Rocha, C. H. (2018). Foreign language MOOCs design: Challenges to provide meaningful learning. *The Specialist, 39*(3). <https://doi.org/10.23925/2318-7115.2018v39i3a8>
- Rodriguez, O. C. (2012). MOOCs and the AI-Stanford like courses: Two successful and distinct course formats for massive open online courses. *European Journal of Open, Distance and e-Learning, 2012*(II). <http://www.eurodl.org/index.php?p=archives&year=2012&halfyear=2&article=516>
- Saldana, A. (2012). *The coding manual for qualitative researchers*. SAGE.
- Scott, D., & Beadle, S. (2014). *Improving the effectiveness of language learning: CLIL and computer assisted language learning*. ICF GHK.
- Seidman, I. (2012). *Interviewing as qualitative research: A guide for researchers in education and social sciences*. Teachers College Press.

- Sharif, A., & Magrill, B. (2015). Discussion forums in MOOCs. *International Journal of Learning, Teaching and Educational Research*, 12(1).
- Sheppard, M. J. (2020). A case study of a radical constructivist approach to teaching innovation. *Journal of Education for Business*, 95(8), 559-566. <https://doi.org/10.1080/08832323.2020.1715331>
- Siemens, G. (2005). A learning theory for the digital age. *Instructional Technology and Distance Education*, 2(1), 3-10.
- Sokolik, M. (2014). What constitutes an effective language MOOC. In E. Martín-Monje, & E. Bárcena (Eds.), *Language MOOCs: Providing learning, transcending boundaries*. (pp. 16-32) De Gruyter. <https://doi.org/10.2478/9783110420067.2>
- Stewart, J. C., DeCusatis, C. S., Kidder, K., Massi, J. R., & Anne, K. M. (2012). *Evaluating agile principles in active and cooperative learning* [Paper presentation]. Student-Faculty Research Day, CSIS, Pace University.
- Stracke, C. M. (2017). The quality of MOOCs: How to improve the design of open education and online courses for learners? In C. Rensing, S. de Freitas, T. Ley, & P. J. Muñoz-Merino (Eds.), *Open learning and teaching in educational communities* (pp. 285-293). Springer. https://doi.org/10.1007/978-3-319-11200-8_8
- Stracke, C. M., Burgos, D., & Tlili, A. (2023). Instructional quality and learning design of massive open online courses. In O. Zawacki-Richter, & I. Jung (Eds.), *Handbook of open, distance and digital education* (pp. 1391-1412). Springer. https://doi.org/10.1007/978-981-19-2080-6_95
- Swaffar, J. (1998). Networking language learning: Introduction. In J. Swaffar, S. Romano, P. Markley, & K. Arens (Eds.), *Language learning online: Theory and practice in the ESL and L2 computer classroom* (pp. 1-15). Labyrinth Publications.
- Tiu Wright, L. (1996). Exploring the in-depth interview as a qualitative research technique with American and Japanese firms. *Marketing Intelligence & Planning*, 14(6), 59-64. <https://doi.org/10.1108/02634509610182913>
- Toven-Lindsey, B., Rhoads, R. A., & Lozano, J. B. (2015). Virtually unlimited classrooms: Pedagogical practices in massive open online courses. *The Internet and Higher Education*, 24, 1-12. <https://doi.org/10.1016/j.iheduc.2014.07.001>
- Turvey, K., & Pachler, N. (2020). Design principles for fostering pedagogical provenance through research in technology supported learning. *Computers & Education*, 146, 103736. <https://doi.org/10.1016/j.compedu.2019.103736>
- Walji, S., Deacon, A., Small, J., & Czerniewicz, L. (2016). Learning through engagement: MOOCs as an emergent form of provision. *Distance Education*, 37(2), 208-223. <https://doi.org/10.1080/01587919.2016.1184400>
- Wang, Z. J., Anderson, T., Chen, L., & Barbera, E. (2017). Interaction pattern analysis in cMOOCs based on the connectivist interaction and engagement framework. *British Journal of Educational Technology*, 48(2), 683-699. <https://doi.org/10.1111/bjet.12433>
- Wei, W., Lihuan, G., Ling, H., & Yenchun, J. W. (2018). Effects of social-interactive engagement on the dropout ratio in online learning: Insights from MOOC. *Behavior & Information Technology*, 38(6), 621-636. <https://doi.org/10.1080/0144929X.2018.1549595>
- Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems Thinker*, 9(5), 2-3.
- Zhang, K., Bonk, C. J., Reeves, T. C., & Reynolds, T. H. (Eds.). (2020). *MOOCs and open education in the Global South: Challenges, successes, and opportunities*. Routledge. <https://doi.org/10.4324/9780429398919>
- Zhu, M., Sabir, N., Bonk, C. J., Sari, A., Xu, S., & Kim, M. (2021). Addressing learner cultural diversity in MOOC design and delivery: Strategies and practices of instructors and experts. *Turkish Online Journal of Distance Education*, 22(2), 1-25. <https://doi.org/10.17718/tojde.906468>

