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Investigating South American Massive Open Online Course (MOOCs) Instructors' Designs Supporting Self-Directed Learning (SDL)

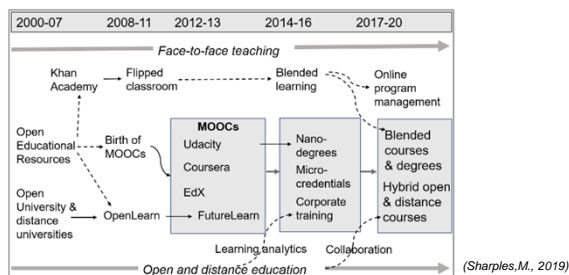Xiaoying Zheng, Zixi Li, Dr. Curtis J. Bonk, Dr. Meina Zhu, Dr. Thomas Reynolds

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SECTION 1

Context

Massive Open Online Course (MOOCs)

(Sharples,M., 2019)

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MOOCs Development

- **MOOCs have an impact on large population. (Stewart, 2013, p. 236)**

- **Online and blended learning expanded since the 20th century. (Bonk et. al, 2020)**

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MOOCs' Learning

- **MOOC learning significantly differs from traditional classroom learning regarding the roles and duties of both instructors and learners.**
- **Successful MOOCs learning requires self-directed learning (SDL) skills (Zhu et al., 2020; Kim et al., 2021).**

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SECTION 2

Literature Review

Self-Directed Learning (SDL)

- **Self-directed learning (SDL)** refers to a type of learning where individuals are in charge of the planning, implementation, and assessment of one's own learning process, which is a critical ability in the learning environments of this new learning age, which are often informal, online, and open (Bonk, 2009, 2020; Hiemstra, 1994; Loyens et al., 2008).

- **Various models and views** on SDL have emerged over the years. Candy (1991), Brockett and Hiemstra (1991), and Garrison (1997) were among the most frequently cited and comprehensive SDL models (Song and Hill, 2007).

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Self-Directed Learning (SDL)

- **Garrison (1997)** included a new SDL perspective, namely, **motivation**, which is especially relevant when attempting to learn from MOOCs because many studies have reported that motivation played an important role in MOOC learning through conceptualization, engagement, commitment, and strategies (Hew & Cheung, 2014; Littlejohn et al., 2016; Romero-Fras et al., 2020; Zheng et al., 2015).

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Garrison's (1997) SDL Framework

1. **Self-management** refers to the ability of task control, including goal setting and the management of time, resources, and support.

2. **Self-monitoring** refers to the cognitive and metacognitive process to construct learning approaches and strategies while setting the learning pace.

3. **Motivation** refers to both entering motivation and task motivation, which can initiate and sustain learning efforts towards cognitive goals.

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MOOCs & SDL

1. MOOC learning significantly differs from traditional classroom learning regarding the roles and duties of both instructors and learners. (Zhu et al., 2020)

2. Successful MOOC learning requires self-directed learning (SDL) skills (Kim et al., 2021; Zhu et al., 2020).

3. As the opportunities to learn from free and open online resources have become increasingly common, there has been increased research interest in self-regulated learning (SRL) and SDL when accessing MOOCs (Alonso-Mencía et al., 2020).

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Research Gap

1. **Less than 1%** of the scientific literature on MOOCs has been centered in the South American region (Veletsianos & Shepherdson, 2016).

2. Existing research on MOOCs in South America has primarily employed **quantitative research methods** (Sánchez & Reyes-Rojas, 2019; Veletsianos & Shepherdson, 2016; Zhu, Sari, & Bonk, 2018).

3. While the majority of MOOCs research focused on students' learning, recent research indicated that designing MOOCs is **challenging for instructors** because of MOOCs' massiveness and openness (Sari et al., 2020).

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Research Questions

1. What strategies do MOOCs instructors in South America use to facilitate learners' **self-management** skills, such as goal setting, time, and resource management?

2. What strategies do instructors use to support learners' **self-monitor** skills, such as self-evaluating learning and monitoring process?

3. What strategies do instructors use to maintain learners' **motivation**?

4. What are some **frustrations and challenges** when they design MOOCs?

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Method

Overview

- A **qualitative** method was used to fill in the research gap.
- **Convenient sampling** was applied.
- **Individual interviews** were conducted with 11 MOOCs instructors.
- **Thematic analysis** was used to analyze the data.
- The data analysis process is **still ongoing**.

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Participants Recruitment

1. **366 MOOCs instructors** from institutions located in South America were identified from major MOOCs websites (i.e., Coursera, EdX, FutureLearn).

2. A **bilingual survey** in English and Spanish was distributed through emails to these instructors to collect demographic information, understanding towards SDL, and screen participants.

3. The criteria for selecting these participants were that they should have **designed at least one MOOC**.

4. **44 survey responses** were collected, and **11 instructors** accepted for the interview invitation.

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Participants Demographics

Name	Gender	Country	# of MOOCs taught
Alejandro	Male	Colombia	1
Bruno	Male	Argentina	more than 5
Christopher	Male	Colombia	2
Daniela	Female	Colombia	1
Echa	Female	Colombia	2
Felipe	Male	Brazil	1
Gavino	Male	Colombia	2
Hernán	Male	Brazil	4
Ignacio	Male	Colombia	1
Jorge	Male	Chile	3
Keiman	Male	Chile	1

Instrument

1. The interview instrument was adapted from the Zhu et al. (2019, 2020) study, which investigated MOOC instructors' practices to facilitate student SDL, which was based on Garrison's (1997) conceptual framework.

2. The **semi-structured interview** protocol included:
   - The consent information
   - Interviewees' **demographic** questions
   - Questions about instructors' **perception** of SDL and open education
   - Questions about **specific perspectives** of SDL based on Garrison (1997)
   - Questions about instructors' **professional development** needs

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Interview Protocol Sample

Question 2	What types of **support** do you receive from your home institutions? Is there a team facilitating your MOOCs design?
Question 4	What do you think of the **responsibility** of instructors to facilitate students' SDL skills in MOOCs?
Question 5	How do you think the design and delivery of your MOOC can help develop students' **self-management skills** such as time, resources, and support? Could you please give me a specific example in designing or developing your MOOC that might have had a direct or indirect impact on these skills?

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Data Analysis

1. All interviews were conducted and video **recorded** through Zoom.

2. **Thematic analysis** (Braun & Clarke, 2006) are used for data analysis.

3. After the researchers reviewed the transcriptions to improve the accuracy, **member check** is applied to further increase the accuracy.

4. Data are coded through **NVivo 12**.

5. Data analysis is still **ongoing** at this moment.

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SECTION 4

Tentative Findings

Self-Management

Key finding #1: The most common way to support self-management is breaking down a long video (e.g., 30 mins) into short videos (e.g., 5 mins).

Quote 1: "*Shorter videos instead of longer videos is better because you can ask questions about the specific topic, not the 30 minutes talking to the camera.* " (Bruno)

Quote 2: *"If you do videos that are 20 min long, that's sad, but they are not going to last. If you do 5 videos of 3 minutes each, in comparison to one of 20 minutes, or something like that, it's gonna be different."* (Echa)

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Self-Management

Key finding #2: Many of them did not help with **goal setting** for students, but said students to do so. About half of them mentioned writing clear learning objectives is important so that students know what to expect and give students directions.

Quote: "*No, I definitely did not design the MOOC with that in mind. And I guess within class, it's very seldom that you find the student that wants to go beyond the core class requirements….I should incorporate complimentary MOOCs that they like to take to direct them to online material that might be of their interests.*" (Keiman)

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Self-Monitoring

Key finding: Reflection questions, progress bar that shows completion, quizzes, and peer-to-peer evaluations, and forums are designed for students to self-monitor their learning.

Quote 1: "...*progress bars, like a roadmap, of course, completion. So you know where you are in each way you can saw. Yes, I think most of those tools we have.*" (Felipe)

Quote 2: "*Oh, in terms of monitoring their learning, what we have is a single material. I have a quiz associated with it, and they only progress in the course if they felt 80% of the quiz correct.*" (Hernán)

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Motivation

Key finding: About half of the interviewees mentioned that they make efforts to motivate students by designing interactive elements (e.g., peer-to-peer interaction, pop-out quizzes in the video), but the gamification features are limited.

Quote 1: "*They started like, okay, 'did you know that?' And you needed to click (the answers) in order to let it (the feedback) pop out, and then get more information….They made it definitely more interactive than just a reading a book or an article.*" (Alejandro)

Quote 2: "*We manage motivation with a lot of visual aids, just like dynamics, not like try to make like short videos, show something to make a question, something have to interact and come back and give answer to the question, see if you felt it right or not.*" (Daniela)

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Professional Development

Key finding: Almost all the teachers received a certain level of training or facilitation from their home institutions on editing videos. They indicated that working in a team with instructional designers or technicians is crucial.

Quote 1: "*The university has a recording studio, with two employees working there. They recorded the video and did small editing, so that's a very good support.* " (Hernán)

Quote 2: "*I had a lot of supports on the recordings, and tutoring my materials of my actual physical course, and then like how to translate the specific activities to make it adapt to MOOCs.*" (Jorge)

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Interesting Perspectives

1. Students need to feel the content is relevant to their life can be motivated, which aligns with previous studies on **major motivations to take MOOCs.**

2. Some instructors collaborate with European instructors to teach MOOCs, **teaching styles** differ from South American styles and so need students to adapt.

3. Some South-American-based MOOCs platforms are more adapted to their culture (e.g., aesthetic, gamification features).

   One instructor mentioned he felt lonely because not many people in South America worked on designing MOOCs and he could not find more accessible support when designing MOOCs.

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SECTION 5

Significance of Study

Fill in Research Gaps

- **Few** scientific literature on MOOCs has been centered in the South American region.

- Existing research on MOOCs in South America has primarily employed **quantitative research methods**

- In addition to the students' learning, designing MOOCs is **challenging for instructors** because of MOOCs' massiveness and openness.

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Possible Implementations

- In addition, the findings should impact on the design and delivery of courses that **affect millions of students in practice**. A critical impact of this study is to provide institution leaders with the insights of carrying out MOOCs projects, especially focusing on providing professional development support for MOOCs instructors.

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SECTION 6

Limitations

Samples

- **Convenient sampling was used.** Given that the response rate is low, there is a limited number of participants that we were able to access and reach to.
  - We had almost a half of the participants came from Colombia and the other half from Argentina, Brazil, anc Chile.
  - We also had only two female participants and nine male participants. Demographic information may influence their perception towards our research questions.

Therefore, any generalization of the findings from this study to other settings might be cautious, at best.

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Participants

- **Participants were voluntary.** The instructors who volunteered to participate in this study could have had higher awareness and motivation to design and deliver MOOCs to facilitate SDL skills than the others who did not participate in the study. As such, the findings of the study may have volunteer bias.

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Data Source

- **Only a single data source.** The study relied on self-reported interview data. Future research could expand to additional data sources and methodologies.

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SECTION 7
Q & A

SECTION 8
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Thank you!

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