

ARTICLE

Exploring Self-Regulated Language Learning with MOOCs

Barbara Conde Gafaro

Massive Open Online Courses (MOOCs) have been integrated into face-to-face language modules to enhance the educational experience of students. MOOCs appear to offer language learning opportunities as well as challenging the self-regulated learning (SRL) behaviour of students. This paper presents a work in progress with regards to the literature review of my PhD, which investigates SRL in face-to-face language modules using MOOCs. It discusses SRL as a requirement for engaging with these courses and analyses the way studies have integrated MOOCs into instructional language modules. This paper concludes by highlighting the need for understanding students' SRL behaviour when engaging with MOOCs as part of their language modules.

Keywords: Self-regulated learning; MOOCs; Foreign Language learning; Blended Learning; Language Classroom

Introduction

Massive Open Online Courses (MOOCs), which have been described as a disruptive force in education, require students to regulate their learning (Littlejohn and Hood, 2018). Blending MOOCs into face-to-face language modules may support the practice of students' language competencies and help them to achieve a reasonable level of self-regulation. This paper reviews the literature that has contributed to understanding the role of self-regulation within blended learning contexts that integrate MOOCs into instructional language modules. Section 1 identifies the features of Zimmerman's (2000) model of self-regulated learning (SRL). Section 2 deals with research that focuses on aspects of SRL in MOOCs. And, Section 3 analyses the way in which some studies have integrated MOOCs into language modules at different levels of education. It concludes by highlighting the need firstly for identifying the processes that students employ to regulate their learning within blended MOOC practices; secondly, for examining how to scaffold students, at small scale, in the use of effective self-regulatory processes during their MOOC engagement.

Section 1: Zimmerman's SRL Model

SRL often refers to the processes whereby students¹ plan, monitor, and reflect on their performance toward goal attainment. The term emerged in North America in the area of educational psychology. Theorising about self-regulation started in the 1970s when cognitive-behavioural

research aimed to improve students' self-control and their academic learning. Researching students' behaviours prompted the need for developing integrated perspectives on self-regulation to systematically explore self-regulatory processes in educational contexts.

By the 1980s, integrated models had been developed, and research on self-regulation increased. Zimmerman (1989) was one of the first theorists to explain SRL as "the degree to which students are metacognitively, motivationally, and behaviorally active participants in their own learning processes" (p. 329). Unlike Winne and Hadwin's (1998) SRL model, Zimmerman's (2000) model acknowledges the interplay of the students' metacognitive processes with other motivational, social and environmental factors.

Zimmerman's (2000) cyclical model represents the SRL process through the management of three interconnected phases, *forethought*, *performance*, and *self-reflection*, in which students are anticipated to set their learning goals and to monitor and assess the strategies they have used to facilitate goal achievement. Each of the phases has a set of sub-areas which specifies the self-regulatory processes that students may undertake until the last phase, in which self-judgment and self-reaction come together to influence the next *forethought* and *performance* processes – thus, completing the self-regulating cycle (**Figure 1**).

Some studies have provided empirical support for Zimmerman's (2000) model. These have tended to focus on physical activities, which have provided students with personally observable outcomes (Kitsantas and Zimmerman, 2002). However, research carried out by DiBenedetto and Zimmerman (2010) has focused on high school science modules studied by seniors whose high levels of

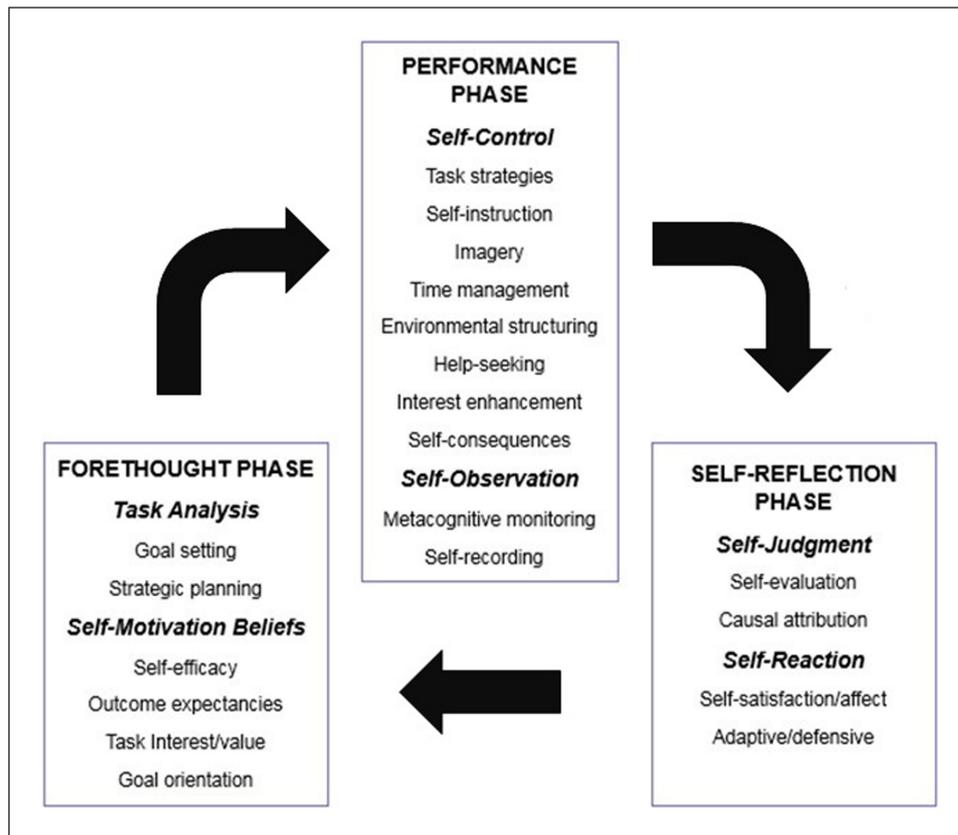


Figure 1: SRL Cyclical Model. Adapted from Zimmerman and Moylan (2009 in Panadero, 2017: 5).

achievement were found to be linked to the frequent use of sub-processes outlined in each phase of this model. Although a few studies have used Zimmerman's (2000) model to gather evidence of self-regulation in science and sports (Poitras and Lajoie, 2018, p. 167), this model has not received empirical support from the domain of language education.

Achieving high levels of SRL can be triggered by external standards imposed by educational institutions and other environmental factors (Bandura, 1986). Hence the need to explore learning environments that provide the means for students to regulate their learning when doing specific tasks. The following section reviews published works on MOOCs and self-regulation.

Section 2: MOOC Learners and SRL

MOOCs welcome people who have access to the Internet and have a desire for learning the subject of their choice without any academic prerequisite needed. However, MOOCs can represent a challenge for people who have not dealt with them before, since these courses are designed for those who are able to regulate their learning (Littlejohn and Hood, 2018). MOOC designs include the presentation of video lectures, subject-specific articles, written assignments, discussion forums and other social networking tools (Margaryan, Bianco & Littlejohn, 2015). Unlike in face-to-face modules where students can engage in dialogue with their teachers, learners² in MOOCs have fewer opportunities to interact with instructors and receive feedback from them (Littlejohn and Milligan, 2015). Learners are also expected to manage the resources

available through the MOOC as well as their time when engaging with such courses (de Waard, Kukulska-Hulme & Sharples, 2015). Consequently, MOOC design requires that learners regulate their learning, seek feedback from others and evaluate their own progress (Milligan, Littlejohn & Hood, 2016, p. 16).

Previous research projects have focused on the strategies that MOOC learners employ to take responsibility for their learning. For instance, findings from semi-structured interviews conducted by Veletsianos, Collier and Schneider (2015) identified the different note-taking strategies employed by thirteen participants while watching video lectures from different MOOC platforms. Notetaking as a task management strategy facilitated learner engagement with the MOOCs, since it was used "to support studying, taking quizzes or doing writing assignments" (Veletsianos et al., 2015, p. 578).

In a larger scale study, Kizilcec, Pérez-Sanagustín and Maldonado (2017) administered a survey that measured the SRL of 4,831 learners across six MOOCs in different subjects offered by Coursera. After identifying their self-regulatory strategies and gathering user interactions with course material and records of course achievement, the researchers found that goal setting and strategic planning were the most effective SRL strategies in helping learners to achieve their learning goals in MOOCs.

Likewise, individual differences also emerged in Kizilcec et al.'s (2017) study, based on the educational background of participants. University students with a master's degree or PhD reported higher levels of goal-setting, strategic planning and task strategies than those with a bachelor's

degree, despite lower levels of help-seeking and self-evaluation. By contrast, working professionals reported higher levels of SRL in goal setting, strategic planning, and help-seeking than the two previous groups of learners, “despite lower levels of self-evaluation” (Kizilcec et al., 2017, p. 26). Highly self-regulated learners use diverse learning strategies to support their learning within different situations (Zimmerman, 2000), though a standard feature of all three groups of learners was lower levels of self-evaluation.

Another study carried out by Littlejohn et al. (2016) has also revealed discrepancies in the self-regulatory levels of learners in MOOCs. Littlejohn et al. (2016) examined the learning behaviour of 788 participants taking a MOOC through a survey and a semi-structured interview with 32 participants. Significant differences in learners’ SRL scores were related to their motivation and strategies for engaging with the MOOC. High self-regulators tended to: (1) follow the MOOC for professional development, (2) evaluate their performance against self-established standards and (3) focus on aspects that were more relevant to them by following a more flexible progression through the course. In contrast, low self-regulators tended to: (1) study the MOOC to pass all assessments and achieve certification, (2) self-evaluate their performance against the MOOC standards and (3) follow a stricter approach in how they structured their learning. These differences regarding the levels of SRL are likely to be associated with learners’ strategies of engagement with MOOCs, their profile and motivation.

This section has outlined the challenges of MOOCs and discussed the features that prompt learners to regulate their learning in them, such as lack of interaction with instructors and instructional design. It has reviewed some studies that provide evidence of MOOC learners using self-regulatory strategies to engage with the course. Research discussed above has focused on the self-regulatory processes of professionals in lifelong learning. Findings have shown that not all learners have the same levels of SRL as they engage in these courses (measured through SRL scores). However, there is not enough research into the SRL behaviour of students following a MOOC as part of their face-to-face language modules. Littlejohn and Hood (2018) argue that governments have the responsibility to make sure all citizens have the ability to regulate their learning so that everyone can benefit from MOOCs. Accordingly, the literature reviewed highlights the need for investigating how to scaffold, at small scale, students’ SRL when engaging with MOOCs beyond the language classroom.

Section 3: MOOCs in the Language Classroom

As evidenced in the previous section, not all learners in MOOCs can self-regulate effectively, and where learners do attempt to gain a sense of control of their learning progress, they do not all attain the same SRL levels’. Integrating MOOCs into language modules may not only support the development of students’ foreign language competencies, but also help them to achieve a reasonable SRL level. This section will comment on the main reasons for some studies to use MOOCs alongside instructional language modules.

Foreign language students may find opportunities to practise the skills of reading, listening and writing within MOOC activities and resources. Most MOOCs offer a well-organised presentation of their material that is easy to follow on a weekly basis (Margaryan et al., 2015). Providing a logical structure and attractive material can stimulate students to practise language competencies at their own pace (Read, Barcena & Kukulska-Hulme, 2016). The wide range of courses offered in different languages may also represent a learning opportunity for students who seek to improve their target language for academic or professional purposes.

Early studies examined the impact on students of the integration of MOOCs into academic language modules. A case-study carried out by Beaven (2013) used MOOCs as an additional online resource for 20 students taking a module in face-to-face English for Academic Purposes (EAP) at the University of Ferrara. Findings based on two qualitative questionnaires and students’ posts in the online discussion forum of the EAP module suggest that using MOOCs to supplement their module syllabus had a positive impact on participants’ motivation and their practice of English.

Beaven’s (2013) study encouraged participants to regulate their learning by allowing them to follow a MOOC of their choice and to work with the materials that were most relevant to their learning needs. Nevertheless, the teacher restricted participants’ range of choice to courses offered in Coursera, which missed out the diversity of other MOOC platforms such as FutureLearn, edX, Iversity, etc, whose courses might have provided participants with different learning experiences. Moreover, the study did not demonstrate how MOOCs could foster participants’ responsibility for, and ability to, monitor and assess their learning process. Therefore, it is essential to consider different quantitative and qualitative methods to capture students’ SRL processes within their language modules supported by MOOCs.

A different application of MOOCs to foreign language education emerged in the form of a tandem MOOC. Appel and Pujolà (2015) designed a MOOC to offer speaking interaction opportunities in which native speakers of English collaborated synchronously with speakers of Spanish while both learned each others’ languages. The project afforded 1,284 learners opportunities to “reflect on their skills, and keep a record of their own progress from the feedback given by different native speakers” through a learner portfolio that included the recordings of the interactions of the tasks and the ratings provided by the partner (Appel and Pujolà, 2015, p. 1699). However, no evidence is presented to show how learners employed any learning strategy they had acquired in subsequent conversations with their tandem partner after reflecting on their performance.

At high-school level, an intervention study was conducted by de Waard and Demeulenaere (2017). Their MOOC-CLIL project observed the possible motivational and self-efficacy benefits that 42 students could derive from integrating MOOCs into English and French classes at a school in Belgium. The study followed a three-phase

approach to increase students' language, digital skills and their online SRL. In the first phase, a MOOC description was presented to make students familiar with different MOOC platforms. Following a flipped classroom approach, they worked with a given MOOC at home and completed activities in class based on selected MOOC content. Next, they chose a course of their preference and worked with it under the supervision of the teacher, who provided online language tools to help them understand specific terms. In the final phase, students produced a short video clip to share their MOOC experience with next year's students.

The SRL of 42 students in the MOOC-CLIL project was monitored through semi-structured focus group interviews limited to 9 students per group and an adapted Skills and Attitudes Measuring (SAM) scale used by the teacher. The researchers also adapted and administered a pre- and post- online survey designed by Pintrich et al., (1991), which has a combined focus on SRL and motivation. There is not much information from the findings that accounts for other sub-processes of SRL, except for strategic planning which increased 9% according to the post-survey results and help-seeking from peers which rose from 61% to 83%.

Research on MOOCs has now begun to focus on exploring language education in face-to-face learning, including a tandem MOOC as a stand-alone course. The projects reviewed above, which blended MOOCs with face-to-face language modules, studied the benefits for motivation, collaborative learning skills and English proficiency of using the audio-visual content of these online courses in high-school and university. Nevertheless, there is a gap in the literature that calls for more language learning-specific research that examines the SRL behaviour of students during the integration of MOOCs as part of their instructional language modules.

Conclusion

Foreign language students are involved in communicative situations that require the practice of their language skills. MOOCs afford students opportunities to practise their language competencies while engaging with well-structured content and activities delivered in the target language. However, MOOCs not only represent opportunities to practise the target language, but also challenge the way students take responsibility for their learning. It is anticipated that MOOC users will regulate their learning by choosing the content they want to engage with and how and when they will engage. Similarly, language students are also expected to use cognitive and metacognitive processes to take responsibility for their language learning.

Integrating MOOCs into instructional language modules could result in an innovative blended learning model that provides students with a direct instruction approach that guides them in their independent learning process, and with an online learning engagement that supports their SRL behaviour while studying at their own pace and practising their language skills. Hence the need to identify the self-regulatory processes students adopt within blended MOOC practices, which may serve to guide them

on how to regulate their learning inside and outside the language classroom.

Reflection

MOOCs represent opportunities and challenges for students. Previous research projects have not provided enough evidence on the self-regulatory learning processes that students adopt while working with MOOCs as part of their instructional language modules. My main study will, therefore, investigate the processes used by a group of students to regulate their language learning during their MOOC engagement. It will explore which of the self-regulatory processes outlined in Zimmerman's (2000) model are employed by students within the blended MOOC practice. Lastly, it will also identify the activities/tools that facilitate students' SRL while working with these courses as part of their language modules.

Notes

- ¹ 'Students' are here defined as learners who are enrolled in a face-to-face study programme.
- ² 'Learner' is used here to indicate an individual actively engaged in learning, but not necessarily enrolled in a face-to-face study programme.

Competing Interests

The author has no competing interests to declare.

References

- Appel, C** and **Pujolà, JT**. 2015. Pedagogical and Technological Issues in the Instructional Design of a Tandem MOOC. In: *Proceedings of E-Learn. World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education October 19 2015* Kona, Hawaii. Waynesville, NC: Association for the Advancement of Computing in Education (AACE), 1696–1705.
- Bandura, A**. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Beaven, A**. 2013. 'Using MOOCs in an Academic English Course at University Level'. In: Beaven, A, Comas-Quinn, A and Sawhill, B (eds.), *Case Studies of Openness in the Language Classroom*. Dublin, Ireland; Voillans, France: Research-publishing.net, 217–227 DOI: <https://doi.org/10.14705/rpnet.2013.000122>
- de Waard, I** and **Demeulenaere, K**. 2017. 'The MOOC-CLIL Project: Using MOOCs to Increase Language, and Social and Online Learning Skills for 5th Grade K-12 Students'. In: Kan, Q and Bax, S (eds.), *Beyond the Language Classroom: Researching MOOCs and other Innovations*. Dublin, Ireland; Voillans, France: Research-publishing.net, 29–42. Retrieved from <https://files.eric.ed.gov/fulltext/ED574781.pdf>. DOI: <https://doi.org/10.14705/rpnet.2017.mooc2016.669>
- de Waard, I, Kukulska-Hulme, A** and **Sharples, M**. 2015. Self-Directed Learning in Trial FutureLearn Courses. In: *Proceedings of the 3rd European Stakeholder Summit May 18–20 2015*, Mons, Belgium, 234–243.
- DiBenedetto, MK** and **Zimmerman, BJ**. 2010. Differences in Self-Regulatory Processes among Students

- Studying Science: A Microanalytic Investigation. *The International Journal of Educational and Psychological Assessment*, 5: 2–24.
- Kitsantas, A** and **Zimmerman, BJ**. 2002. Comparing Self-Regulatory Processes among Novice, Non-Expert, and Expert Volleyball Players: A Microanalytic Study. *The Journal of Applied Sport Psychology*, 14(2): 91–105. DOI: <https://doi.org/10.1080/10413200252907761>
- Kizilcec, RF**, **Pérez-Sanagustín, M** and **Maldonado, JJ**. 2017. Self-Regulated Learning Strategies Predict Learner Behavior and Goal Attainment in Massive Open Online Courses. *Computers & Education*, 104: 18–33. DOI: <https://doi.org/10.1016/j.compedu.2016.10.001>
- Littlejohn, A** and **Hood, N**. 2018. Reconceptualising Learning in the Digital Age: The [Un]democratizing Potential of MOOCs. *Springer Briefs in Open and Distance Education*. Singapore: Springer.
- Littlejohn, A**, **Hood, N**, **Milligan, C** and **Mustain, P**. 2016. Learning in MOOCs: Motivations and Self-Regulated Learning in MOOCs. *The Internet and Higher Education*, 29: 40–48. DOI: <https://doi.org/10.1016/j.iheduc.2015.12.003>
- Littlejohn, A** and **Milligan, C**. 2015. Designing MOOCs for Professional Learners: Tools and Patterns to Encourage Self-Regulated Learning. *eLearning Papers*, 42: 38–45.
- Margaryan, A**, **Bianco, M** and **Littlejohn, A**. 2015. Instructional Quality of Massive Open Online Courses (MOOCs). *Computers & Education*, 80: 77–83. DOI: <https://doi.org/10.1016/j.compedu.2014.08.005>
- Milligan, C**, **Littlejohn, A** and **Hood, N**. 2016. Learning in MOOCs: A Comparison Study. In: Khalil, M, Ebner, M, Kopp, M, Lorenz, A and Kaz, M (eds.), *EMOOCs 2016 Proceedings of the European Stakeholder Summit on Experiences and Best Practices in and around MOOCs, February 22–24 2016* Graz, Austria. Norderstedt: Books on Demand, 15–26.
- Panadero, E**. 2017. A Review of Self-Regulated Learning: Six Models and Four Directions for Research. *Frontiers in Psychology*, 8(422): 1–28. DOI: <https://doi.org/10.3389/fpsyg.2017.00422>
- Pintrich, PR**, **Smith, DAF**, **Garcia, T** and **Mckeachie, WJ**. 1991. A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ). [online] Accessed March 16 2018 <https://files.eric.ed.gov/fulltext/ED338122.pdf>.
- Poitras, EG** and **Lajoie, SP**. 2018. Using Technology-Rich Environments to Foster Self-Regulated Learning in Social Studies. In: Schunk, DH and Greene, JA (eds.), *Handbook of Self-regulation of Learning and Performance*, 166–179. New York: Routledge. DOI: <https://doi.org/10.4324/9781315697048-11>
- Read, T**, **Barcena, E** and **Kukulska-Hulme, A**. 2016. Mobile and Massive Language Learning. In: Martín-Monje, E, Elorza, I and Riaza, BG (eds.), *Technology-Enhanced Language Learning for Specialized Domains: Practical Applications and Mobility*, 151–161. New York: Routledge.
- Veletsianos, G**, **Collier, A** and **Schneider, E**. 2015. Digging Deeper into Learners' Experiences in MOOCs: Participation in Social Networks Outside of MOOCs, Note-Taking, and Contexts Surrounding Content Consumption. *British Journal of Educational Technology*, 46(3): 570–587. DOI: <https://doi.org/10.1111/bjet.12297>
- Winne, PH** and **Hadwin, AF**. 1998. 'Studying as Self-Regulated Learning'. In: Hacker, DJ, Dunlosky, J and Graesser, A (eds.), *Metacognition in Educational Theory and Practice*, 277–304. Hillsdale, NJ: Lawrence Erlbaum.
- Zimmerman, BJ**. 1989. A Social Cognitive View of Self-Regulated Academic Learning. *Journal of Educational Psychology*, 81(3): 329–339. DOI: <https://doi.org/10.1037/0022-0663.81.3.329>
- Zimmerman, BJ**. 2000. 'Attaining Self-Regulation. A Social Cognitive Perspective'. In: Boekaerts, M, Pintrich, P and Zeidner, M (eds.), *Handbook of Self-Regulation*, 13–39. San Diego, CA: Academic Press. DOI: <https://doi.org/10.1016/B978-012109890-2/50031-7>
- Zimmerman, BJ** and **Moylan, AR**. 2009. 'Self-Regulation: Where Metacognition and Motivation Intersect'. In: Hacker, DJ, Dunlosky, J and Graesser, AC (eds.), *Handbook of Metacognition in Education*, 299–315. New York: Routledge.

How to cite this article: Conde Gafaro, B. 2019. Exploring Self-Regulated Language Learning with MOOCs. *Journal of Interactive Media in Education*, 2019(1): 14, pp. 1–5. DOI: <https://doi.org/10.5334/jime.527>

Submitted: 21 February 2019

Accepted: 13 June 2019

Published: 10 September 2019

Copyright: © 2019 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.

[u] *Journal of Interactive Media in Education* is a peer-reviewed open access journal published by Ubiquity Press.

OPEN ACCESS 