Bringing the MOOC into the classroom: an innovative pedagogical practice at the Polytechnic Institute of Santarém

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Resumo

Innovative pedagogical practices refer to a new or creative approach to teaching and learning that goes beyond traditional methods with the aim of improving learners' performance, critical thinking, problem-solving skills and overall learning outcomes. It involves the use of innovative strategies, techniques and tools supported by research and designed to meet the needs and interests of learners.

MOOCs, in turn, have several advantages, including:

- Access to high quality content - they often feature expert instructors and selected course materials, providing access to high quality educational content that would otherwise be inaccessible;
- Flexibility and convenience - they offer flexibility of time and place, allowing learners to access course materials and complete assignments at their own pace, which can be particularly beneficial for adult learners or with some form of employment;
- Diversity of learning opportunities - they cover a wide range of topics, allowing learners to explore different areas of interest, from scientific/academic subjects to vocational skills, thereby enhancing their knowledge and skills in different areas;
- Interactive learning - they often include interactive elements such as discussion forums, quizzes and assignments, which can facilitate active learning and learner engagement;
- Cost-effective - they are often free or significantly cheaper than traditional face-to-face courses, making education more accessible and affordable to a wider audience.

MOOCs often include innovative approaches to how education is delivered and how learners engage with the content that they offer (or could offer) and enable: Online and multimedia learning; Massive scale; Flexibility and personalisation; Adaptive learning; Assessment and feedback; Lifelong learning and professional development. In fact, the effectiveness of MOOCs as a pedagogical practice may depend on several factors, including course design, learner engagement and teaching quality. During the pandemic, many teachers turned to MOOCs as a learning resource, yet it continues to exist in the post-pandemic period. It increases the knowledge and competence not only of students, but also of teachers (who can enroll in MOOCs to improve their own knowledge and skills, which can then be incorporated into their classroom teaching). Because MOOCs are flexible with regard to time, space and rhythm, they allow students to learn at their own pace and can serve as an entry point or as an opportunity to delve deeper into topics, depending on their level. In addition, MOOCs reduce the workload on the instructor, as they don't have to produce all the content to cover all the topics in a curriculum unit. Therefore, MOOCs can be used in the classroom as:

- a supplemental learning resource (as a supplement to classroom teaching or as additional learning material for deeper exploration):
- a flipped classroom model (where the content is learned outside of the classroom and the class time is dedicated to active learning activities such as discussions, group work and practical projects);
- a blended learning model (the online component is provided so that students can learn at their own pace and the classroom time can be used for discussions, activities and individual support);
- customized learning paths (can be selected based on students' interests, needs and abilities).

Knowing that not every MOOC is suitable for classroom use, it is important not only to know how to select MOOCs, but also how to integrate them into the classroom. Therefore, before introducing MOOCs, teachers should carefully review, evaluate and assess the quality and effectiveness of the content, and ensure that it is aligned with learning objectives, teaching strategies and curriculum requirements. If it is selected and integrated as a learning strategy, teachers need to monitor pupils' progress, provide support where needed and allow time for class discussion of the content.

In this talk we present a case of using MOOCs in a bachelor course in Multimedia Production in Education. It was implemented in the Curricular Unit (CU) of Cybersecurity in Socio-educational Contexts (2nd year, 4th semester) and the selected MOOCs from NAU were: *Cidadão Ciberseguro*; *Cidadão Ciberinformado*; *Consumidor Ciberseguro*; *Cidadão Cibersocial*. For this case, we use the following pedagogical methods and learning strategies:

- a mixture of traditional methods (applied to the present) and active learning strategies;
- face-to-face sessions supplemented by online distance learning sessions;
- the use of the flipped classroom and ubiquitous learning;
- encouraging collaborative learning and peer-to-peer learning;
- the use of the project based learning strategy.

The learning scenario was carried out over a period of 14 weeks, as shown in the tables below:

	w1	w2	w3	w4	w5	w6	w7
Online / at distance	Explore the NAU and get to know the courses on offer.	MOOC completion (get the certificate).	Search for more information about the topic.	Prepare the materials/contents.			Students prepare in advance a set of questions.
In classroom	Introduction to the curricular unit modules, work methodology and assessment; introduction to the concept of MOOC.	Organize the class in small groups; Mooc assignment (each group will work a different topic); explore the learning outcomes of the MOOCs.	Each of the groups discusses and reflects on what they have learned in the MOOC; They answer a Quiz prepared by the teacher with immediate feedback.	Each group prepare a presentation (format of their choice).	Each group present to the class what they have learned; engage in a debate (teacher is the moderator).	Class answers to a Quiz prepared by the teacher with immediate feedback (content from the 4 MOOCs).	An expert in the field of Cibersecurity is invited to the class.

	w8	w9	w10	w11	w12	w13	w14/w15
Online / at distance	Teacher set a challenge (ProjBL) – each group must design and develop OER (format of their choice) to present the topic they have learned about to a younger audience.	Organize the information gathered.	Development of the OER.				Final version of the OER.
In classroom	Each group define the topic, the target audience, the context and the objectives – validated by the teacher.	Each group define the material/format and the tools to develop the OER and present a draft for validation.	Follow-up concerning the development status of the OER.		Each group present to the class their OER and collect feedback from peers and teacher.	Each group make the necessary adjustments to the final version of the OER.	Groups present their OER in na open session (to the target audience, if possible)

With the implementation of the scenario, students (and teachers) developed their competences (digital literacy, critical thinking, communication, collaboration, creativity, information literacy) and increased their knowledge in specific topics. After the experiment in this CU, more teachers from other CUs are getting involved in this approach. As a result, students are now aware of this possibility. They are able to search in different MOOC platforms and choose their own courses according to their needs and preferences.

Keywords
MOOC; Higher Education; pedagogical practices

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