

LMOOC INTRODUCTION TO PORTUGUESE: DESIGN, IMPLEMENTATION, EVALUATION

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Abstract

This paper presents the course Introduction to Portuguese, delivered as a Language Massive Open Online Course (LMOOC) in the AcademiaUP platform, and the evaluation of the results of its 1st edition. The course does not require previous knowledge in Portuguese and aims to equip participants, with varied profiles, with the necessary tools to communicate in basic everyday situations. It consists of 8 learning units based on a story that is divided into 8 episodes filmed in a natural environment in Porto, from which a didactic path is proposed that seeks to respond to different learning styles and to guarantee the adequacy to the individual pace of each student. Students who successfully complete the course are given a certificate of participation. The 1st edition of the course had 864 students, with a 30% completion rate and a final course evaluation of 9.31/10. Taking these positive indicators as a starting point, we evaluate the course, identifying some of its strengths and challenges it faces.

Keywords: LMOOC, Portuguese, beginners, language learning, interdisciplinarity.

1 INTRODUCTION

The University of Porto (U.Porto) has a long history with Massive Open Online Courses (MOOCs) and has been involved with some of the key elements in the industry. In 2014, U.Porto hosted HOME, the Higher Education Online, MOOCs the European way conference, and the Porto Declaration was born, ensuring that "European MOOCs keep following the upward movement they have been on" [1].

The course Introduction to Portuguese is delivered as an LMOOC (Language Massive Open Online Course) at the Distance Education platform of the University of Porto - AcademiaUP.

LMOOCs, defined as "dedicated web-based online courses for second languages with unrestricted access and potentially unlimited participation" [2] are a specific type of MOOCs, whose offer has grown considerably in the past few years. They present distinct formats, mainly depending on the proposed instructional models (a. o., [3, 4, 5, 6, 7]). For European Portuguese, however, LMOOCs offer is still very scarce, therefore it is an area of potential development and experimentation.

The course was developed by an interdisciplinary team (teachers, students, multimedia technicians, television technicians and professional actors) involving the Faculty of Arts, Educational Technologies and TVU (University Television) of the University of Porto. It is a free course that offers an introduction to the Portuguese language and culture at an autonomous and individual pace, aiming at a wide public with very different profiles and potentially very diverse interests. Based on the Common European Framework of Reference for Languages descriptors for level A1 [8], the course comprises 8 learning units with an estimated workload of 4-hours a week, for a total of 32-hours, and is based on a story film that is composed of 8 episodes recorded in a natural environment in Porto.

The description of the course is the main topic of section 2 and takes into consideration its objectives (2.1), target audience (2.2), global structure (2.3), learning units' structure (2.4), adopted methodology (2.5), and evaluation and certification (2.6). Section 3 is dedicated to the presentation of the course's 1st edition results, which considers the participants' profile (3.1), their performance (3.2), and their evaluation of the course (3.3). Following the course evaluation, we outline, in section 4, some of the course's strengths and challenges. Finally, some concluding remarks are provided in section 5.

2 COURSE DESCRIPTION

2.1 Objectives

The general objectives of the course are to provide basic knowledge of the Portuguese language in basic daily communication situations; to offer basic linguistic and pragmatic contents; to present some

aspects of the Portuguese culture; to promote opportunities for integration and cultural exchange. Furthermore, the course aims to promote an autonomous contact with the Portuguese language and culture at the pace and convenience of the participants, while supporting the development of digital skills and promoting social inclusion in a multicultural, interconnected community.

2.2 Target audience

The course is aimed at teenagers and adults and is suitable for people with very varied profiles, learning styles and needs, namely people who want to do academic mobility, before or during this mobility; migrants, who need to learn to communicate in basic daily situations to speed up their integration; workers integrated into Portuguese companies on stays of variable duration; tourists who want to visit Portugal; people who are curious about a new language and culture; people living in isolation, whatever the reasons.

2.3 Course structure

Fig. 1 presents the global course structure.

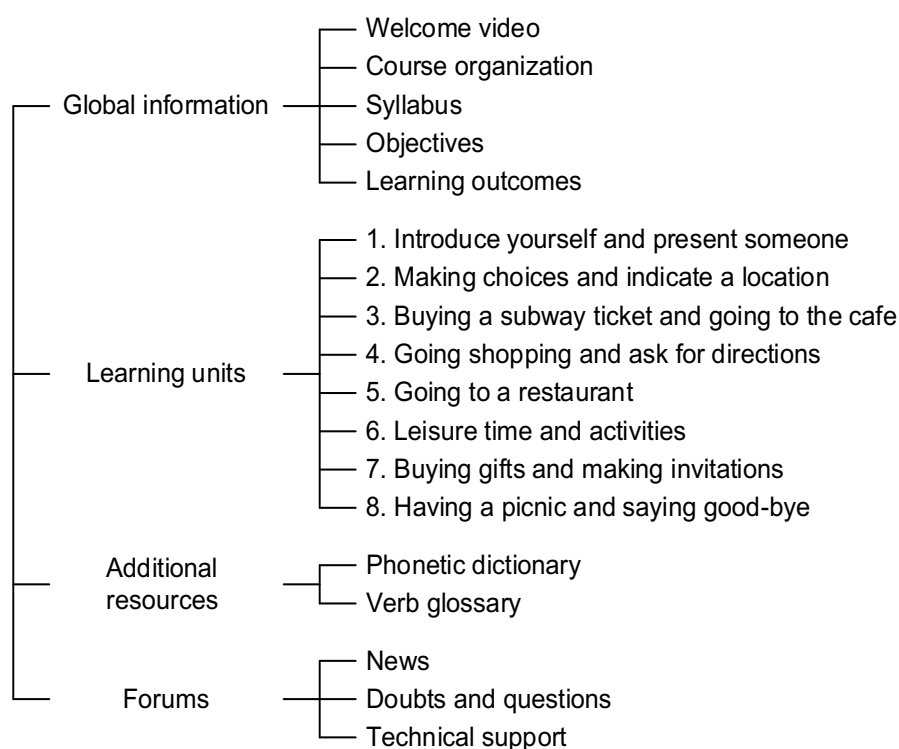


Figure 1. Global course structure.

This organization provides students with a simple, informative, and easily manageable course guide, which they can access as a guiding scheme for their learning path. Therefore, in the beginning, participants are provided with general information on the organisation, structure, objectives, and expected learning outcomes by the end of the course.

In addition, they are also provided with two resources independent of the learning units: a Phonetic Dictionary, and an audio-visual Verb Glossary, to which they have access throughout the course. The Phonetic Dictionary presents students with interactive animations, illustrations, and explanations of each sound of the language, supported by a Phonetic database of ca. 2000 words with all sounds of Portuguese in all phonetic and prosodic contexts with a professional recording (Fig. 2). The Verb Glossary is composed of the set of verbs worked in the different units, allowing students to recover the written and audio conjugation of verbs relevant to the understanding and utterances production.

Finally, participants have two types of forums available, which allow interaction with the pedagogical and technical team to resolve issues arising during the course. The News forum is used weekly to announce the start of each learning unit, encourage students' participation in the unit activities and expand participants interaction outside the strict learning unit's context.

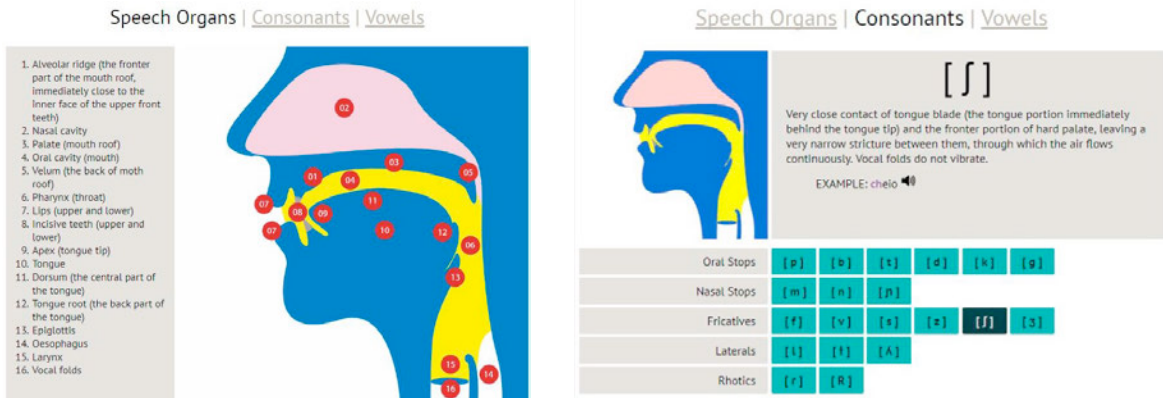


Figure 2. Images from the Phonetic Dictionary.

2.4 Learning unit structure

The structure of each learning unit is schematized in Fig. 3.

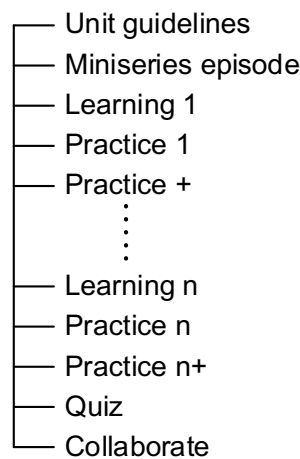


Figure 3. Learning unit structure.

The guidelines of each unit consist of a summary of the communicative and linguistic content, and its main activities, always indicating the learning outcomes expected at the end of the learning unit. The selection of each learning unit content, its sequence, and internal organization are underpinned by the communicative situation focused on the unit, also adapting to the fact that this is a course intended for independent use by students in an e-learning environment.

Each learning unit proposes the following path: watching an episode of the film; watching short videos that reuse some short episode sequences with language content organized by topics (Fig. 4, 5, 6, 7); practice through various exercises at the end of each topic (practice) (Fig. 8, 9, 10); taking a quiz at the end of the unit for self-assessment of the acquired knowledge. Additional exercises are also proposed (practice+) and collaboration in the week's challenge (Fig. 11), which aims to strengthen interpersonal relationships among participants while applying the unit contents in a communicative task.

All course content, including the content of each learning unit, is presented in a bilingual version: Portuguese and English. All audio-visual material is stored on YouTube and subtitled in Portuguese and English, with subtitles activated at the student's choice.



Figure 4. Unit 7: Learning 7.1.

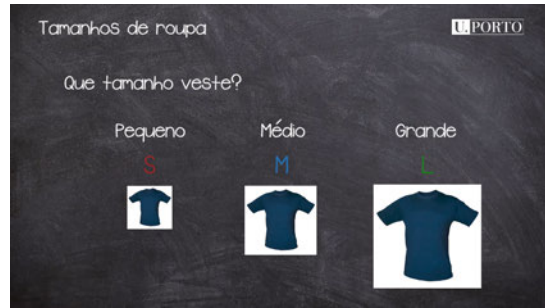


Figure 5. Unit 7: Learning 7.2.



Figure 6. Unit 3: Learning 3.4.

Os sons do português / The Portuguese sounds

Ouça e repita várias vezes as seguintes palavras para praticar bem os sons. Não se esqueça de acentuar a sílabas tónica, sublinhada.

Listen and repeat the following words several times to practice the sounds well. Don't forget to put the stress on the underlined syllable.

(m) → masculino, (f) → feminino, (pl) → plural

Vogais semifechadas / Mid-close vowels					
Grafia / Spelling	<ɐ>	Grafia / Spelling	<e>	Grafia / Spelling	<o>
Som / Sound	[e]	Som / Sound	[e]	Som / Sound	[o]
ca.ma.ra (f)	camera	três	three	pu.lô.ver (m)	pullover
me.ca.ni.co (m)	mechanic	pe.sse.go (m)	peach	cham.pô (m)	shampoo
pi.râ.mi.de (f)	pyramid	in.glês (m)	english	a.vô (m)	grandfather

Figure 7. Unit 1: Learning 1.9.



Figure 8: Unit 1: Practice 1.6.

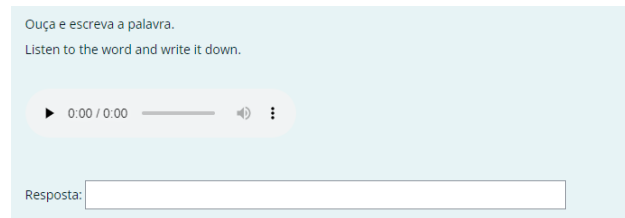


Figure 9: Unit 5: Practice 5.7.



Figure 10: Unit 4: Practice 4.2



Figure 11: Unit 3: Collaborate 3.

2.5 Methodology

2.5.1 Teaching and Learning approach

The course is based on a communicative approach and task-based learning methodology (a. o. [9, 10, 11]). Each learning unit focuses on daily communicative situations, aim to provide students with the necessary tools to achieve a communicative outcome in similar situations. Therefore, linguistic content is limited to the needed basic language structures to interact in daily communicative situations and a minimum of metalinguistic content. The miniseries performed in a naturalistic environment contributes to creating an atmosphere close to natural, elemental, and recurring communication situations faced by a foreigner arriving or who has been living in Porto for a short time. The sociocultural dimension of this naturalistic setting contributes to the simulation of a learning immersion experience.

The course supports the development of receptive, productive, and interpersonal communication skills, promoting incremental access to the Portuguese language and culture according to their individual learning skills, interests, and pacing. The pedagogical itinerary is based on a metacognition approach, allowing students to learn by doing as well as learning how to learn by developing competencies in digital literacy [12].

The course is based on a model of continuous formative self-assessment, with automatic feedback, which allows students to monitor their learning. There is also room for the resolution of problems occurring in the learning path through the support of a tutor, who intervenes only when requested, and through peers, in the forum for doubts and questions that accompanies the course. In this context, the number of attempts to complete the exercises proposed in the practice and practice+ components is unlimited.

2.5.2 Educational audio-visual approach

The audio-visual approach focuses on the miniseries and the production of short educational videos based on clips retrieved from that miniseries, which support the explanation of the language content. Considering that the phonetic component is an essential part of language learning, each unit also presents videos with phonetic content, allowing students to learn the sounds of Portuguese.

In the last decade, with the advent and development of platforms such as YouTube or Vimeo, the video has become ubiquitous. That naturally translated into education and the Massive Open Online Courses (MOOCs) were instrumental in using video to convey most of the information in the course. The video combines audio and visual information into a multimedia format that can explore some of the cognitive principles of multimedia learning defined by [13]. The approach was to develop interesting and engaging content, departing from extracted clips of an episode. The contents were then deconstructed, allowing for progressive and sustained language acquisition. All of this was achieved in under 10 minutes. The team tried to make these videos even shorter, under the 5 minutes target, given that shorter videos are considered more engaging [14].

A simple, mainly graphic, and non-metalinguistic approach underpins the production of these videos, which are intended to be both educational and recreational.

2.6 Evaluation and certification

Besides the continuous self-assessment throughout the course, a final assessment is proposed by the end of each unit, in a total of 8, comprising a quiz with 16 multiple-choice questions covering the unit contents, along with the learning outcomes defined in the learning guide provided at its beginning. This assessment is compulsory for students wishing to receive a certificate of participation in the course. The student must achieve an assessment grade equal to or higher than 50% in each quiz. In this case, students have only one attempt to do it, but without a time limit to complete it. Since taking the quiz is not a requirement for progression to the next unit, students who do not wish to receive a certificate of participation may consider it optional.

The successful completion of the final quiz of each learning unit grants students the certificate of participation.

3 LMOOC 1ST EDITION RESULTS

Section 3 presents the results the 1st edition of the course. We consider the participants profile (3.1.), performance (3.2), and their evaluation of the course (3.3.).

3.1 Participants' profile

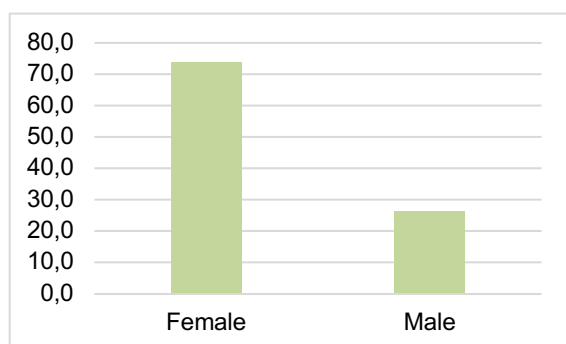
In the 1st edition of the course, 864 participants enrolled, 258 of whom successfully completed the mandatory assessment to obtain a certificate.

For the characterisation of the 864 students enrolled, first, and then for the 258 students who obtained a certificate, we consider gender, age group, nationality, and mother tongue (L1). All results are presented with relative frequencies.

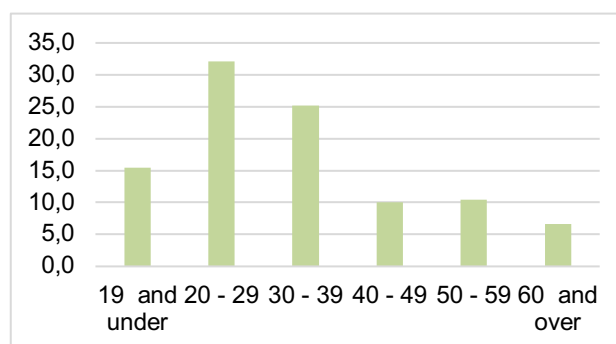
Regarding the total number of students, 68.1% were female, 31.7% were male, and 0.2% indicated as being another gender. As for the age group, we considered 6 groups, with the following distribution, in descending order of participants: 20-29 (36.3%), 30-39 (25.2%), 40-49 (12.5%), 19 or less (12.3%), 50-59 (7.9%) and 60 or more (5.8%).

The participants indicated 83 nationalities and listed 98 different L1 and 98 different mother tongues were indicated. While the 3 most represented nationalities are Czech (15.3%), Indian (12.5%), and Spanish (9.8%), the 3 dominant mother tongues are Spanish (16.9%), Czech (14.8%), and English (13.8%). Overall, there is a great diversity of profiles and a wide geographical dispersion with participants from the five continents, with more than 60% of students aged between 20 and 39.

258 participants obtained the certificate, representing 30% of the total participants enrolled in the course. Graphics 1 and 2 present the information regarding the gender and age of these participants.



Graphic 1. Participants distribution by genre.



Graphic 2. Participants distribution by age group.

Data analysis shows that the highest percentage of students is female (73.6%), with 57.7% aged between 20 and 39 years. About the total group, there is a higher percentage of participants in the group aged 19 years or less (15.5%), as well as in the group aged 50-59 (10.5%) and 60 years or more (6.6%), with a decrease in students aged between 40 and 49 (10.1%).

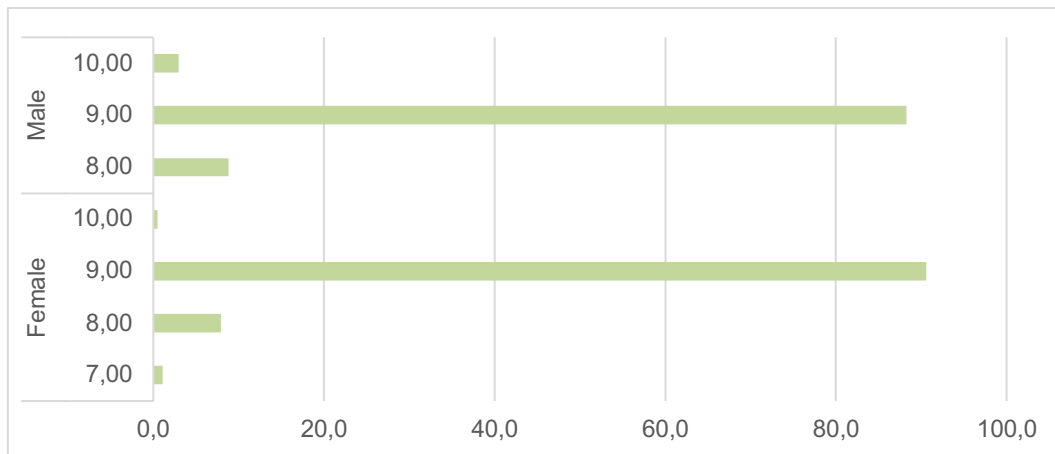
Participants who received a certificate are from 46 nationalities, with the three most represented, in descending order, being Czech and Spanish (17.4%), followed by Indian (7%). These students have 50 different L1, with Spanish, Czech, and English being the most represented with respectively 27.5%, 16.7%, and 10.5%.

Overall, the six reasons most frequently mentioned by the students in the final survey as motivation to attend the course are, in descending order of significance, learning Portuguese for free, learning at their own pace and according to their availability, improving their Portuguese language skills, obtaining proof of participation, facing a new personal challenge, and occupying their free time.

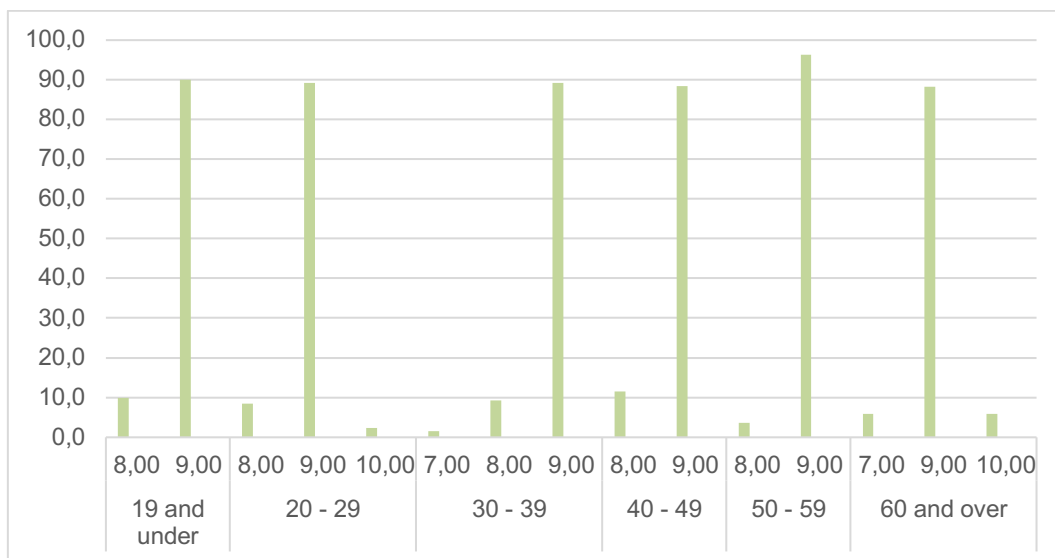
3.2 Participants Performance

As mentioned in section 3.1, the results presented in graphics 3 and 4 refer to the sample of 258 students who obtained the certificate, which represents 30% of the total enrolled students.

The performance of these students regarding the average score obtained on all the quizzes is presented in correlation with gender (Graphic 3) and age group (Graphic 4).



Graphic 3. Quiz results by participants' genre.



Graphic 4. Quiz results by participants' age group.

Concerning the results of the quizzes according to gender (graphic 3), the performance of participants of both genders is similar, with no statistically relevant difference. In both groups, the percentage of students who obtained a final score of 9 (9/10) dominates, followed by a score of 8 points.

As for the analysis of the results obtained considering the variable age group, there are no significant differences between the groups. In all of them, the classification that dominates is that of 9 points. There is a variation in the other classifications obtained by the participants, given that in the age groups 19 years or less, 30-39, 40-49, and 50-59, no participant reached the maximum final average of 10 points, only represented in the age groups 20-29 and 60 years and over. The lowest scores of 7 are present in the 30-39 and 60+ age group, corresponding respectively to 1,5% and 5,9% in these groups.

Overall, the conclusion is the students final scores are high and not significantly genre and/or group age-dependent.

3.3 Participants' evaluation

244 students completed a final course satisfaction survey composed of 22 questions and distributed by four domains: I. Participation in the course; II. Course; III. Global assessment; IV. Comments and suggestions.

The overall assessment of the course was very positive, with a rating of 9.31/10. This evaluation was confirmed by the multiple comments produced by the students, from which we summarize some of the positive aspects recurrently mentioned: the attractiveness of the miniseries, the simplicity of the educational materials that allow for easy learning, the subtitles in Portuguese and English, the possibility

of knowing aspects of the Portuguese culture, but also of the culture of other students, the facility of following the learning path, the combination of several skills and the use of different audio-visual resources. By a student's initiative, a student WhatsApp group was created as a follow-up to the course with more than 100 subscribers, which remains very active until now. Besides the positive aspects, several recommendations were suggested, which focused mainly on the promotion of more collaborative tasks and oral production and interaction tasks.

In the near future, we foresee a thorough presentation of the survey content to show the students' perception of the course, considering as varied as pedagogical, technological, and learning styles dimensions. This evaluation is significative to further improve LMOOCs' design and implementation by attending to students' needs and interests [15].

4 STRENGTHS, WEAKNESSES AND FUTURE IMPROVEMENTS

Our self-evaluation of the course has considered the survey results, particularly the multiple comments written by the students, coupled with the reflection on the work done to improve it in future editions.

From here follows the survey of potentialities and challenges facing the course. Starting with the challenges, the restrictions on speaking practice, which require the development of additional tools to increase oral interaction activities, in addition to the implementation of strategies that involve more students to complete the course, are priority aspects to be considered.

More externally, potential problems posed by outdated technological support structures, low-speed internet connections, or poor digital skills of participants are also challenges.

Regarding the strengths, besides the aspects mentioned by the students, we highlight the availability of the course for very different audiences, its suitability for students with no previous knowledge of Portuguese, the engagement in daily communicative situations in a naturalistic environment, the possibility of reusing its contents independently and its adaptability to different contexts and educational objectives.

These potentialities were recognised by the International E-Learning Association (IELA), which awarded the course an honourable mention in the IELA Awards 2021, a competition that annually awards prizes to the best work carried out in an academic context in e-learning, b-learning, and mobile-learning, based on criteria such as educational soundness and effectiveness, usability, and global relevance.

5 FINAL REMARKS

In this paper, we presented the results of the 1st edition of the LMOOC Introduction to Portuguese course, highlighting the percentage of students who completed it and their overall assessment as indicators of its success.

In this sense, our future work will be enhancing the positive aspects listed and developing strategies to address the limitations detected.

Furthermore, although an LMOOC is not necessarily an OER because it is mainly an environment for self-regulated and collaborative learning, it can, under certain conditions, come close to an open educational resource that is reusable in all its parts [16]. Bearing this in mind, we would like to explore the potential relation of this LMOOC and OERs in future work.

ACKNOWLEDGEMENTS

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REFERENCES

- [1] I. Martins, N. Regadas, and M. Amaral, "Developing the 1st MOOC of University of Porto: Challenges and Strategies" in *Proceedings of the International Conference E-learning 2016* (Nunes, M. B., M. McPherson, P. Kommers, P. Isaias, and L. Rodrigues, eds.), pp. 156-160, Lisbon: International Association for Development of the Information Society (IADIS), 2016.

- [2] E. Bárcena, and E. Martín-Monje, E. “Language MOOCs: An emerging field” in *Language MOOCs: Providing learning, transcending boundaries* (E. Martín-Monje, and E. Bárcena, eds.), pp. 1-10, Berlin: De Gruyter Open, 2014.
- [3] T. Miyazoe, “How does an LMOOC work?” in *Proc. E-Learn: World Conf. on E-Learning in Corporate, Government, Healthcare, and Higher Education* (J. Dron, and S. Mishra, eds.), pp. 638-643, Vancouver: Association for the Advancement of Computing in Education (AACE), 2017.
- [4] A. Motzo, A., and A. Proudfoot, “MOOCs for language learning – opportunities and challenges: the case of the Open University Italian Beginners’ MOOCs” in *Beyond the language classroom: researching MOOCs and other innovations* (Q. Kan, and S. Bax, eds.), pp. 85-98, 2017, Ireland: Research-publishing.net.
- [5] T. Read, “The architecture of Language MOOCs” in *Language MOOCs: providing learning, transcending boundaries* (E. Martín-Monje, and E. Bárcena, eds.). pp. 91-105, Berlin: De Gruyter Open, 2014.
- [6] M. Sokolik, “What constitutes an effective language MOOC?” in *Language MOOCs: providing learning, transcending boundaries* (E. Martín-Monje, and E. Bárcena, eds.), pp. 6-32, Berlin: De Gruyter Open, 2014.
- [7] M. V. Liessem, and V. J. Leffa, “LMOOCs: reflexões preliminares para o desenvolvimento de MOOCs comunicativos”, *Calidoscópico*, vol. 16, no 3, pp. 460-468, 2018.
- [8] Council of Europe, Common European framework of reference for languages: Learning, teaching, assessment. Cambridge, U.K: Press Syndicate of the University of Cambridge, 2001.
- [9] D. Nunan. Task-based language teaching, Cambridge: Cambridge University Press, 2004.
- [10] R. Ellis, “Taking the critics to tasks: the case for task-based teaching” in *Knowledge, skills and competencies in foreign language education* (M. K. Aishah, S. K. Bhatt, W. M. Chan, S. W. Chi, K. W. Chin, S. Klayklung, M. Nagami, J. W. Sew, T. Suthiwan, and I. Walker, eds.), pp. 103-117, Singapore: NUS Centre for Language Studies, 2014.
- [11] C. Castro, Ensino de Línguas Baseado em Tarefas - Da Teoria à Prática, Lisboa: Lidel, 2017.
- [12] A. Chik, “Learner Autonomy and Digital Practices” in *Autonomy in Language Learning and Teaching. New Research Agendas* (A. Chik, N. Aoki, and R. Smith, eds.), pp. 73-92, London: Palgrave Macmillan, 2018.
- [13] R. Moreno, and R. E. Mayer, “Cognitive principles of multimedia learning: The role of modality and contiguity”, *Journal of Educational Psychology*, vol. 91, no 2, pp. 358-368, 1999.
- [14] P. J. Guo, J. Kim, and R. Rubin, “How video production affects student engagement: an empirical study of MOOC videos” in *Proceedings of the first ACM conference on Learning @ scale conference (L@S '14)*, pp. 41-50, New York, USA: Association for Computing Machinery, 2014.
- [15] R. Luo, and Z. Ye, “What makes a good-quality language MOOC? An empirical study of criteria to evaluate the quality of online language courses from learners’ perspectives”, *ReCALL*, vol. 33, no 2, pp. 177-192, 2021.
- [16] C. M. Stracke, S. Downes, G. Conole, D. Burgos, and F. Nascimbeni, “Are MOOCs Open Educational Resources? A literature review on history, definitions and typologies of OER and MOOCs”, *Open Praxis*, vol. 11, no. 4, pp. 331–341, 2019.