



E-Learning and Arabic in the Age of Covid-19: Rethinking the Learning of Vocabulary

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ABSTRACT: Since the beginning of the Covid-19 lockdown in March 2020, Italian universities have been faced with a completely new situation, generally marked by a certain backwardness as regards distance language teaching. This paper describes the impact that distance learning has had on language teaching, particularly on the teaching of lexis in the first year of a three-year degree course in Arabic at Roma Tre University, Italy. Learning vocabulary is a vital part of mastering a language, and experience has shown that students often do not work methodically on this aspect, which leads to problems with listening, speaking, reading, and writing skills. Online teaching has only aggravated this situation and, consequently, new approaches and methodologies are required. This case study presents solutions that have been found in adopting MOODLE, the open-source platform that provides students with a dynamic instrument aimed at facilitating learning. In particular, it describes and evaluates the use of the glossary in MOODLE to help first-year students learn Arabic vocabulary. The students had to add 20 vocabulary items to the glossary each week, and contributions had to follow a certain format that required morphological awareness of the main Arabic lexical structures. The monitoring system whereby the teacher could view student activities further bolstered the learner-centered methodology upon which the



whole system is based. Results showed that all students contributed to creating an instrument that promoted independent learning. Overall, the MOODLE glossary was a useful tool for vocabulary learning and recommendations for its successful implementation are reported. This case study will be of interest to language teachers, as well as to learners and instructors dealing with specialized terminology.

KEY WORDS: E-learning; Arabic Vocabulary; TAFL

INTRODUCTION

Since the beginning of the Covid-19 lockdown in March 2020, Italian universities have been faced with a completely new situation, generally marked by a certain backwardness as regards distance language teaching. Online teaching was a challenge both for instructors and students, since many of them were not fully familiar with the use of learning platforms and digital resources. Teaching at university level has always been face-to-face, albeit with ever-increasing attention paid to learners' needs and questions. In this respect, Italy boasts a long tradition of in-class lectures and university-level instruction that is broadly linked to face-to-face lessons. Online training, and online universities, are relatively recent phenomena in Italy, having started, and been officially recognized, only within the last twenty years (Trombetti and Stanchi). The aim of online platforms in use before the Covid-19 lockdown was almost always to provide students with materials such as texts and grammar files; obviously, in this new context the use of such communication channels simply to provide materials was both reductive and insufficient.

Moreover, the teaching of a language like Arabic implies a consideration of various objective difficulties such as a different alphabet, the system of morphological patterns and the challenge for the student to learn vocabulary. Such difficulties must be faced in online teaching through the use of suitable learning platforms and targeted methodologies. The case study described in this paper evaluates the use of MOODLE in an online A1-A2 level Arabic course during the Covid-19 lockdown of 2020 at Roma Tre University. Emphasis was placed on a collaborative approach to vocabulary learning, and first-year students added 20 vocabulary items to a specific glossary each week. Contributions were expected to follow a certain format requiring morphological awareness of the main Arabic lexical structures. The monitoring system whereby the teacher could view student activities further bolstered the learner-centered approach upon which the whole system was based. Results showed that all students contributed to building an instrument that promoted independent learning.



SETTING UP AN ONLINE COURSE AND MOODLE RESOURCES

ONLINE COURSES: BETWEEN INNOVATION AND NECESSITY

The use of teaching platforms and accessible online materials is a response to the increasing demand for distance training courses and, consequently, the need for innovation in the methodological, technical and strategical approaches to language teaching. The need for innovative teaching is strictly related to the development of e-learning courses in virtual environments. Technologies can facilitate and transform the learning environment in three ways: adding flexibility and strengthening in-class teaching; organizing and sharing teaching resources, and aiding the collaborative process in teacher-student relations (Bonaiuti).

From its overall design to its contents, an online course can be considered as the coming together of various skills. As pointed out by Piras *et al.*, an online course should thus be carefully planned in advance. Weerasinghe *et al.* provide the following suggestions in designing this kind of course: announce the learning outcomes at the outset and provide the related learning objectives at the beginning of each section; order the learning content according to the syllabus; add suitable activities to each unit of learning content; provide at least one quiz at the end of each course section to allow students to evaluate their learning achievements; provide discussion forums and chat rooms. Setting up an online course requires time and a clear design in terms of the overall structure and contents in relation to the overall syllabus. Unfortunately, when the Covid-19 epidemic spread through Italy at the end of February 2020, Arabic courses had only just restarted after the winter semester break. Therefore, classes based on face-to-face teaching during the first semester had to move to online teaching. This shift was sudden and unplanned, so teachers had to quickly reformulate a part of their programs and their materials in order to adapt to the new teaching environment. The emergency situation did not allow any extra time for meticulously planned online courses: indeed, the greatest concern was to try and maintain the level of interaction as high as possible, since students had enrolled on an in-class course and it was necessary to keep it as close to an in-class model as possible. In this respect, lessons were held on Microsoft Teams (as well as Zoom). Indeed, the teacher's presence, and the resulting interaction with students, are among the main concerns with online courses, and a key element in avoiding high drop-out rates (Crews *et al.*; Goral; Griffith and Charles; Panagiotidis; Weerasinghe *et al.*). This is even more true in the case of language learning: in distance language courses input can be easily provided, but output is less straightforward (Romagnoli and Ornaghi). For this reason, a platform such as MOODLE, which is able to assess the students' progress, was indispensable. Learners were given the chance to interact in the target language, to get feedback, and to recognize the need to change their language to achieve successful communication (Perifanou and Economides 3563). The "distance" modality created a potential element of change and innovation, while guaranteeing the continuity of teaching activities in an emergency situation such as that caused by Covid-19. New technologies in the teaching field can create a dimension that is limitless in space and time with *repeatability* being a central feature that is



generally missing in face-to-face teaching. In this dimension, students and their learning process become the foci.

MOODLE AND ITS FUNCTIONS

Roma Tre University uses the MOODLE platform (*Modular Object-Oriented Dynamic Learning Environment*), an LMS (*Learning Management System*) open-source learning environment which provides software suitable for distance training. The use of MOODLE has become increasingly popular in foreign language teaching, and language teachers are discovering that MOODLE has increased potential compared to other online learning environments. MOODLE can be part of a curriculum with a blended learning approach with actual classroom tasks and activities extended to an online environment. It can help language teachers and students, providing not only a place to share information, but also a social environment where they can interact in a variety of settings. MOODLE is one of the most widely used open-source e-learning platforms. In fact, its wide range of activities and resources ensure that teacher-student relations are managed efficiently and with sufficient flexibility. It is a platform that facilitates the creation of a course website that can limit access to regularly enrolled students and that offers an exchange of information between users through synchronous (chats) and asynchronous communication (discussion forums). From a functional perspective, it has easily configurable features: the *Activities* function allows for a varied typology of learning activities and tests, such as quizzes and glossaries. There are also other instruments like *Forum*, *Chat* and *Wiki* that exploit the potential for exchange and interaction in a virtual environment. Such activities allow teachers to be involved in the students' learning processes at different stages, enhancing active and participative online learning for individuals and groups. Activities begin with online socializing and becoming familiar with the technology, then move through the stages of information exchange, higher order thinking and engagement (Sakar). Moreover, quizzes and forums give the teacher the chance to evaluate the students' progress in terms of monitoring individuals completing the activities as well as the group's progress in acquiring skills. In particular, the *Forum* is a useful communication tool: as long as there is an internet connection, teachers and students can communicate with their group at any time and from anywhere. Because forums are asynchronous, students can take their time formulating their messages or reading the messages of others and writing their replies. They can draft and rewrite until they are happy with the result, rather than feeling under pressure to respond immediately. Indeed, research indicates that more students are willing to participate in an asynchronous forum than to speak up in class (Cole *et al.*; Sakar). It is also possible to upload materials, such as texts and media resources, although, unlike *Activities*, these do not allow for interaction between participants. From a technical viewpoint, MOODLE is efficient and easy to handle, and is compatible with various browsers (even if not particularly up to date). Table 1 summarizes its principal features:



Activity	Module	Description
Creation	Database	Allows users to create, display and search a bank of recorded entries on any topic; allows the sharing of a collection of data;
Organization	Lessons	A set of sequenced topics summarizing the instructional materials; access is possible via respective links;
Delivery	Assignments	Allow teachers to collect work from students, evaluate their work and provide feedback, including grades, privately; allow students to upload assignments;
	Workshops	A peer assessment activity with many options; students can submit their work via an online text tool and attachments;
Communication	Chats	Allow synchronous conversation;
	Forums	A communication tool whereby students and teachers can exchange ideas by posting comments;
	News	A special forum for general announcements; allows teachers to add posts and to send emails;
Collaboration	Glossary	A list of definitions can be created and maintained; a mechanism for collaborative activities that can be restricted to entries made by the teacher;
	Wikis	Allow users to edit collaborative web pages; space is provided for collaborative work;
Assessment	Choice	Allows teachers to ask questions and specify multiple choice answers; a useful mechanism to stimulate thinking about a topic;
	Quiz	Allows teachers to design and create quizzes with a variety of questions with different types of answers, such as multiple choice, true/false items and short answers;
	Survey	Allows teachers to gather feedback from students using model questionnaire formats;
	Feedback	Allows teachers to create surveys in order to collect feedback;
Reusability	SCORM	Are specifications that enable the interoperability, accessibility and reusability of the learning content; these instruments enable SCORM packages to be included in the course;
	External tools	Enable interaction with flexible learning resources and activities with other websites; provide access to new activity types or materials.

Table 1. Activities and Modules of the MOODLE platform. Source: Table 1 is adapted from Costa, Carolina, et al. "The Use of the MOODLE e-learning Platform: a Study in a Portuguese University", *Procedia Technology*, vol. 5, 2012, p. 336.



THE MOODLE COLLABORATIVE GLOSSARY

Learning new vocabulary is extremely challenging for learners of any language. MOODLE Glossary is a tool that can help students to acquire new vocabulary by creating mini dictionaries for the target items and inserting them in the course. Normally, vocabulary lists are made individually, and it is very difficult to check and grade them and offer feedback. Moreover, they are only seen by teachers. The MOODLE glossary tool makes the process more interactive and efficient. The whole class keeps a single vocabulary list and students can read each other's entries and write feedback. Thus, the need to face the global Covid-19 pandemic, with its social distancing policies and rules, was met by MOODLE, as it made language learning a process of collaborative interaction. This process emphasizes that learning activities and practice are completed on an ongoing basis, resulting in language production through a meaningful repetition of words. Understanding and learning vocabulary in a foreign language is of prime importance (Alqahtani; Daud and Pisal; Moghadam *et al.*), and is also the key to improving language skills. In line with the learning process and practices, active and collaborative interaction can become more targeted, and a satisfying speaking environment can be created even within the limitations of an online network. Online learning provides new opportunities for increasing learner independence. As mentioned above, students themselves can create wordlists and interact using the feedback and comments functions.

As highlighted by Reinhardt, social media has been having a massive influence on language learning in recent years: it provides formal foreign language learning with informal learning patterns, free from the limits of space and time. Moreover, online learning media can help students to communicate and share information. These experiences (Li) reveal that online learning can provide students with encouragement, so learning a foreign language becomes meaningful. It has been remarked (Peeters) that a well-targeted and well-planned online course increases students' responses, and it is even able to encourage students to ask more questions and for more clarifications from the teacher.

The MOODLE Glossary activity allows participants to create and maintain a list of definitions, similar to a dictionary, creating a collection of terms and definitions that the group can search for or simply browse. Teachers have the option of restricting access to a Glossary, meaning that only they can create entries, or they can also allow students to add new items. The Glossary can thus be set up and used exclusively by teachers, although its main function is intended to be a collaborative exercise. As we can see from Figure 1, students can add entries (words or phrases) in the "concept" box and insert definitions in the "definition" space. Each glossary entry can have a list of associated keywords. In "attachment" students can add attachments such as pictures or articles. The configuration of an entry is evidently more complex than the simple inserting of a word, requiring awareness and deeper lexical insight as we will see in section (4). Each member of the class can be asked to contribute a term, a definition, or comments on definitions that have been submitted. Multiple definitions can be rated by the teacher



or by students, with the highest-rated definitions accepted for the final class glossary. Engaging in the process of learning through discussing and refining the glossary items can go a long way towards motivating students to begin using the new terms.¹

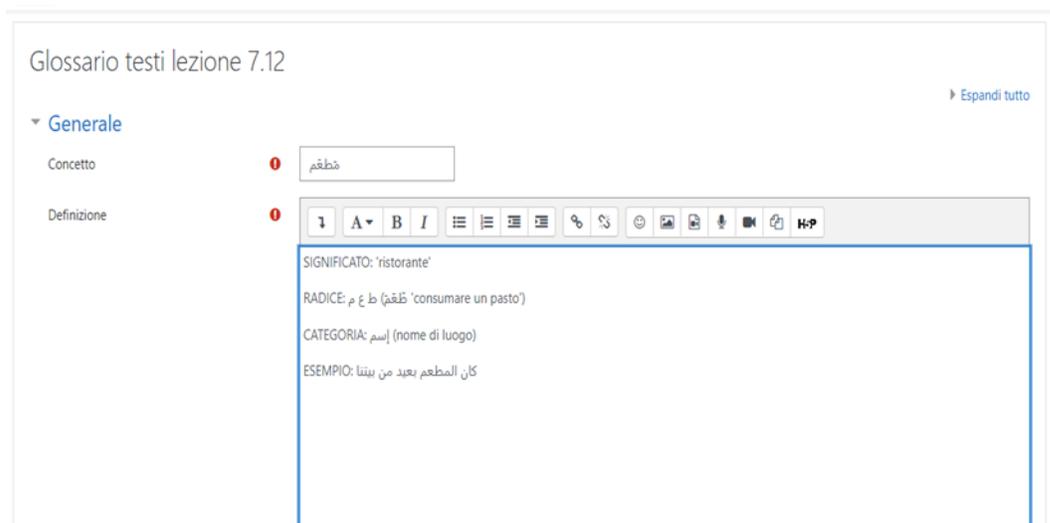


Fig. 1 The MOODLE Glossary page

Whether concentrating on reading or writing, teachers can create a whole-class glossary activity and assign students to enter a certain number of new words with their definitions, examples, characteristic images, videos and other multimedia links, which might, for example, give the pronunciation of the item. Students may also be assigned the task of writing a certain number of replies to other students' entries and rate them for quality. When students are responsible for creating the definitions, they are much more likely to remember the word and the correct definition (Ginnis). This activity represents an useful tool in helping students to learn the vocabulary of the week and encourage them to create their own definitions and examples. In sum, collaborative glossaries give students even more practice using the new words and applying their meanings.

DIFFICULTIES ENCOUNTERED LEARNING ARABIC VOCABULARY

The first step in the vocabulary acquisition process is establishing a link between form and meaning, and this is what the vast majority of vocabulary materials and activities attempt to do. However, a common assumption seems to be that learning the meaning is of the utmost importance, while the form component is either downplayed or disregarded (Saigh and Schmitt). Nonetheless, a misanalysis of word forms can lead to misinterpretation (Bensoussan and Laufer). Recognizing words in a text relies on the

¹ https://docs.MOODLE.org/2x/ca/Using_Glossary#Collaborative_glossaries. Accessed 1 Oct. 2021.



rapid cognitive processing of salient orthographic features in the L2, so if lower-level processing skills at the word-level are insufficient or inadequate, comprehension will be negatively affected (Saigh and Schmitt). In this light, efficient word-level processing skills are an essential prerequisite for word recognition, which undoubtedly affects reading processing as well. Word recognition is the major factor involved in L2 reading, and is the essential area where bottom-up and top-down processes meet (Randall). The issue of word-level awareness involves phonological and orthographic decoding skills that affect oral proficiency and, in particular, knowledge of vocabulary.

Another issue that must be taken into consideration is the degree of difference between the L1 and L2: learners often transfer their L1 processing routines to the L2 in an attempt to process L2 forms whether such routines are appropriate to the L2 system or not (Laufer). In the case of similar languages, this process can help in memorizing word-forms (Doughty; Ellis). However, when the two languages have very different characteristics, the use of L1 processing routines can be unproductive and even cause problems (Culter and Norris). In essence, both Italian and Arabic belong to the sound-based type of writing system in which phonemes are represented by graphemes. However, the most evident difference is the writing system itself, since the Arabic system is consonantal. Literary Arabic is written according to an alphabetical system of 28 basic letters and is written and read from right to left. There is a predictable sound-symbol correspondence between letters and their sounds if the text has diacritic signs. However, irregularities exist and knowledge of grammar (morphology and syntax) and contextual interpretation is required (Abu-Rabia, "Reading in").

Despite the relatively large consonantal inventory of Standard Arabic, its vocalic inventory is small, consisting of just six vowel phonemes: the three short vowels are /a/, /i/ and /u/, which correspond to their respective long equivalents /ā/, /ī/ and /ū/. Vowels are written in different ways depending on whether they are long or short: the three long vowels are written, while the corresponding short vowels are not, although they can be realized using diacritical marks. This difference between Italian L1 and Arabic L2 is an element that creates some problems for the correct acquisition of vocabulary in terms of form-meaning relationships. Italian Arabic learners often confuse short and long vowels, a difficulty that derives from the general process of transferring phonemes to their graphemes. In this sense, one of the aims in involving students in creating a glossary is to make them pay attention to the correct orthography. Moreover, identifying a word without diacritics (i.e., with short vowels unmarked) is not reliant on consonant spelling and phonological information, but on extra-lexical information, such as morphological and syntactic knowledge, as well as the sentence and discourse contexts. Texts are typically written in vowelised, so-called shallow, orthography for beginner readers, and in unvowelised deep orthography for more advanced readers. Verbs, nouns and adjectives are a combination of root letters and affixes, consisting of short and long vowels, and consonants. In many cases an Arabic word consists of only root consonants and short vowels. The addition of certain short vowels or more complex affixes (phono-morphological information) to the root conveys specific meanings and specific pronunciations. Furthermore, vowelising the end of words in texts indicates the grammatical function of these words in the sentence. If texts are not



vowelised, these short vowels must be deduced during the reading process, which is a cognitively demanding task. In most modern written and printed literary Arabic texts, no short vowel signs are given, and the reader has to deduce their presence based on the context and/or prior linguistic knowledge of grammar, morphology and syntax (Abu-Rabia, "Reading Arabic Texts"; Abu-Rabia and Siegel; Gwilliams and Marantz; Bourisly *et al.*; Taha *et al.*).

THE USE OF A COLLABORATIVE GLOSSARY IN ARABIC

A CASE STUDY

The case study was conducted from March to June 2020 with a limited number of participants: 23 university students of Arabic (mostly 19 years old) in the second semester of their first year (A1-A2 levels). The length of the lessons did not change as a result of the transition from classroom to online teaching and the group in question continued to follow eight hours a week of the Arabic Language course. The students were asked to add 20 words a week (the second semester is an 11-week course) to the MOODLE glossary and a survey was conducted at the end of the semester to gauge their opinions of this experience. Students were asked to participate in the course glossary and each week the teacher verified their progress through quizzes based on multiple choice and cloze-type questions. At the outset, the technical skills of the students were mixed: 60% of them declared they were fairly familiar with the technological tools, while 25% did not feel very confident and 15% said they had no familiarity with the technology. Most problems were resolved through appropriate instructions provided by the teacher through email exchange, wikis and instruction guidelines. Overall, data collection included a preliminary survey on the students' technological skills, contributions to the glossary, MOODLE activity reports, feedback notes, email exchanges and final observations made by the participants. Thanks to the MOODLE activity reports, it was possible to check how frequently the students accessed the platform and their contribution—percentage-wise—in creating the glossary.

VOCABULARY

This study can be positioned within the more general sphere of vocabulary acquisition. Several studies (Nation; Brown; Schmitt) have highlighted the relationship between the difficulties in acquiring new words and the vast number of words that have to be mastered. Their form, meaning, purpose and function need to be learnt from both a receptive and a productive perspective. In this context, there has been a development in Vocabulary Learning Strategies (VLS) in recent decades: indeed, VLS are at the heart of many studies that have focused on the different stages and processes of vocabulary acquisition. In general terms, VLS comprise two main processes: the discovery phase,



which involves learning the meaning of new words, and the reinforcing phase, in which words that are already known are consolidated (Schmitt; Nation). After reviewing the literature on VLS, some lack of guidance emerged in VLS instruction and in the descriptions of program development, which make program design challenging (Brown). In the wider field of strategies-based instruction (SBI), four stages have been highlighted (Rubin *et al.*):

- raising learner awareness of strategy use;
- presenting and modelling new strategies;
- providing repeat opportunities for practice;
- self-evaluation of the effectiveness of strategies.

This is very much the context of the present research. After reading and translating texts during the online lessons, students selected—with teacher support—the most important vocabulary in terms of frequency as well as the usefulness that students attributed to them in a social and communicative context. Before adding the terms to the MOODLE glossary, the teacher provided the information required to create the glossary (as will be seen in the next section). The insertion of lexical items was carried out autonomously by students and quiz-based exercises were added so that they could practice the specific vocabulary and self-evaluate their progress. Another aspect that needs to be stressed is the source of the vocabulary selected. Vocabulary was taken from the texts that students worked on during the semester,² the emphasis being on everyday items. In the first-year program, dialects have not yet been introduced and so students have not yet encountered MSA variety.

CREATING THE GLOSSARY

The MOODLE glossary gave students the option to add new entries or to read existing contributions. As we saw in Figure 1, when making a new entry two boxes appear on the page for “concept” and “definition”. Students were also asked to link the entry with a category. These categories had been created by the teacher and were labelled “week 1”, “week 2” etc. so that revising the vocabulary on a week-by-week basis was facilitated. Students were asked to submit relevant vocabulary that they had come across during the online sessions and that had been verified with the teacher. They inserted the item in the “concept” box and under “definition” wrote the Italian translation, the word root with its meaning, the morphological pattern and, finally, an example sentence. In most cases, the example sentence was from one of the texts analyzed during the lessons, although students could also invent sentences³ Awareness of word morphology rules required teaching some preliminary notions such as the derivational system that allows the three-consonantal root and the pattern to be recognized, as shown in the following examples:

² Besides the grammar coursebook, we adopted *Imparare l'arabo conversando* (Salem and Solimando).

³ Almost 85% of students used items from the texts examined during the lessons.



(1)

"concept": *maṭ'am*

"definition": 'restaurant', *ṭa'ama* 'consumare un pasto', *ism al-makān* (place noun), *kāna al-maṭ'am ba'īd min bayti-nā* 'the restaurant was far from our house'.

(2)

"concept": *yaqra'*

"definition": 'he reads', *qara'a* 'to read', *fi'l muḍāri'* (imperfect verb), III M.S, *yaqra' abī al-ḡarida kulla yawm* 'my father reads the newspaper every day'.

(3)

"concept": *ta'allamtum*

"definition": 'you learnt', *ta'allama* 'to learn', *'alima* 'to know', *fi'l māḍin* 'past verb', II M.P, *ta'allamtum al-dars ḡayyidan* 'you learnt the lesson very well'.

In the case of nominal patterns, students were asked to identify the root and the morphological pattern; concerning verb forms, they had to write the translation first, and identify the root and the conjugation. In cases such as (3), students had to write both the derivational form and the root with its meaning. All in all, it was an operation that required morphological insight and awareness.

By the end of the semester, 220 items had been added to the glossary with all students receiving written feedback after submitting their entries. The feedback consisted of general remarks on the students' work as well as corrections and explanations where errors had been made regarding grammatical input. Students were asked to learn the new vocabulary, which was tested each week through activities such as quizzes, mostly consisting of multiple choice and gap-filling exercises as well as paraphrasing exercises.

DATA RESULTS AND DISCUSSION

It has been demonstrated (Elgort) that vocabulary lists of words can be a fast and successful means of acquiring a new language. As highlighted in section 3, Arabic poses problems in vocabulary acquisition due to its different alphabet as well as its morphological and syntactical features. The present study started from an awareness of these issues and, consequently, required from students a higher degree of involvement in the creation of the glossary. While vocabulary is learnt in the form of a list, the students were active agents in the process as they added morphological information and embedded each word in an example sentence in order to provide a meaningful context.

Regarding the frequency of student access to the glossary, the MOODLE activity report provided data on how often each student viewed it. This data was compiled over a period of 10 weeks. Overall, the uptake according to viewing figures was mixed: of the 23 students, 12 viewed the glossary every week, 8 viewed it for 9 of the weeks, 2 for 8 of



the weeks and 1 for just 4 of the 11 weeks. Observations made during the weekly quizzes showed that those students who had learnt the vocabulary regularly seemed to have better results. Indeed, the quizzes were very useful, not only because they made it easier to verify students' progress, but also because they provided further extrinsic motivation to use the glossary in order to improve vocabulary acquisition.

The glossary also proved to be an effective method for students to learn how to note down vocabulary including all the relevant grammatical information. All contributions had to be submitted and approved by the teacher before being posted, and students received feedback on their contributions. The glossary was discussed at the end of the semester and students were asked whether they felt their vocabulary had increased during semester. Most students commented favorably: "finally, I found the right method to learn vocabulary" (Student 5) or "vocabulary has always been my principal difficulty in the language learning, even in Spanish! With Arabic I thought it would be impossible. I was forced to reconsider; this method worked very well".

Current educational thinking and changes in the professional environments have called for an approach to pedagogy in which learning becomes a process of creating knowledge (Kolb and Kolb; Ryding). Creating knowledge demands an active and independent role for students. In the present case study, it is interesting to note that the state of necessity caused by the Covid-19 pandemic forced teachers to find new technological solutions rapidly. This assured not only the continuation of the courses, but also made us all reconsider methodological issues. Students are put at the center of the learning process, thus privileging their involvement in the construction of knowledge. From this perspective, technological support, and the use of all collaborative and interactive forms of learning, are fundamental.

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