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Oral Development for LSP via Open Source Tools

Abstract

For the development of oral abilities in LSP, few computer-based teaching and learning resources have actually focused intensively on web-based listening and speaking. Many more do on reading, writing, vocabulary and grammatical activities. Our aim in this paper is to approach oral communication in the online environment of Moodle by striving to make it suitable for a learning project which incorporates oral skills. The paper describes a blended process in which both individual and collaborative learning strategies can be combined and exploited through the implementation of specific tools and resources which may go hand in hand with traditional face-to-face conversational classes. The challenge with this new perspective is, ultimately, to provide effective tools for oral LSP development in an apparently writing skill-focused medium.

Keywords: oral skills, Moodle, resources, LSP tasks, blended course.

1. Introduction

Teaching and learning LSP (Languages for Specific Purposes) via different types of computer-mediated communication are related to work on digital genres, e-learning, and blended course developments (cf. Caballero & Ruiz-Madrid, 2006; Arvanitis & Panagiotidis, 2007). Online work based on the e-platform Moodle is particularly useful for the specific development of LSP.

In our own institution, (see AVUEX in the bibliography for web reference), a combination of autonomous and collaborative learning is the chief goal, i.e., to be

able to develop electronic means of communication along with traditional face-to-face class conversation. We think that competence unfolds as a process of learning via appropriately contextualised stimuli, i.e., the active role of motivational input and motivated intake (cf. Gregg, 1989; Ellis, 2004). The learning system should then favour an extensive development of not only reading and writing, but also aural/oral skills.

The nature itself of computer-based environments is significant as a medium where students can participate and interact actively. This context can contribute to the motivational factor by both offering interactivity and an appealing audio/visual interface (i.e., graphical design), in agreement with Cooper & Riemann (2003). In fact, the computer interface, if managed effectively, should prevent any potential lack of enthusiasm or interest among FL teachers, as Felix (2001) claims. Instead, an increase in motivation may be gained by providing adequate means for speaking practice via the computer. Oral communication is a key issue for any type of FL learning process, and in the case of LSP, oral work may successfully take place via the Moodle platform.

Undoubtedly, computers are fast becoming prevalent at all educational levels and across a wide scale of teaching modalities, ranging from face-to-face to blended courses and even those fully online. There is a rapid proliferation of studies on Moodle for FL learning (e.g., Graf & List, 2005), and this type of pedagogical research defends an integrated approach in the use of technology wherein the development of oral skills must be contemplated along with the rest.

This paper describes a blend of individual and collaborative learning procedures though the implementation of a combined set of online activities and tools. These resources go hand in hand with traditional face-to-face conversation classes. In light of these premises, our design of the oral blended course departs from a tailored Moodle interface where one of the salient advantages is the facilitation of collaborative work, which on the one hand allows for a student-catered environment for individual progress, and, on the other, connects a group of classmates, teachers and instructors, where learning is promoted by means of participation in shared experiences (Jeon-Ellis, Debski & Wigglesworth, 2005). In essence, in rising to meet the challenge, computer technology can indeed be significantly helpful for the enhancement of LSP students' oral development, i.e., designed for specific purposes in language learning.

2. Specific oral skills as goal

Graf and List (2005), among others, evaluate the use of information technologies for educational settings, reaching different conclusions that tend to underline the essentially pedagogical scope in which researchers must act to promote technological integration within the curriculum. One premise considered is that oral skills have

traditionally been left out when applying technologies to FL curricula. Also, a potential gap is generally perceived in terms of the few existing tools that allow for real dynamic interactivity, and without this key feature, motivation for oral communication often diminishes.

Because oral skills are a chief target in any FL program, their exclusion from a fully operative online system weakens the overall effectiveness of the program. In the different oral dimensions of LSP communication (e.g., academic, occupational, social, etc), the range of possible levels for oral exploitation may include linguistic acquisition of phonemes and sounds, word constructions and phrases within given statements and sentences, or the enactment of identity roles by means of discursive strategies, socio-cultural interactions, and "language-in-action collaborative tasks among intimates" (McCarthy, 1998: 59). Producing oral text/conversation should be regarded as a by-product of understanding key discourse effectively, and this process should take place in a constructive context that favours dynamic, clear, and effective interpersonal exchanges for LSP communication (cf. Koestner, 2006: 86).

The need to communicate orally, intrinsic in all human interactions, should naturally find effective means in the digital world, and should be realised by means of truly interactive tools that enable dynamic communicative exchanges. The fact is that oral communication in LSP goes beyond reading/writing practise or vocabulary acquisition; it includes, among other aspects, learners´ needs to participate by transforming their linguistic/content knowledge into specific communicative acts, such as workplace discourse (cf. Koester, 2006). In other words, the design of specific contents on-line that adapt to the students' demands, needs and preferences is ever important, and must be aimed at the improvement of learning models via online tools (e.g., Wintergest, Decapu & Vrena, 2003).

For oral media-based communication, there are many advantages derived from the great potential of information technologies. Some are: availability of authentic material, potential to participate in specific communicative events, appropriateness for collaborative learning and task-based work, multimedia-related features of interaction, and hypermedia-based flexibility in a non-linear form, among other aspects that may enable the integration of all possible linguistic-communicative features in the system (cf. Mougalian & Salazar, 2005).

For the oral development of collaborative tasks, as Carter (2004: 165) states, a type of socio-cultural and even intimate communication should be developed among speakers. This interaction can be fostered through the appropriate management of electronic resources when motivational input has been provided. An example would be the use of oral forums, where different ideas may be shared regarding a specific issue for which cooperation is highly valued.

The communicative focus constitutes the basis for this LSP teaching/learning process. It should lead to a holistic scope of learning by means of both micro/macro skills and specific tasks (e.g., task-based learning in languages for specific academic purposes; cf. Dudley-Evans & St. Johns, 1998). Electronic media can provide a suitable environment to develop tasks and projects, and the acquisition of content and

language can be fostered by exploiting meaningful discourse strategies and resources aimed at the improvement of academic and/or professional competency.

3. Multimedia resources and cases for oral LSP development

In general, pedagogical effectiveness may derive from the computer-supported collaborative learning (CSCL) process. This transfer of collaborative learning to the virtual media would enable the construction of an interactive and varied communicative context (cf. Cabero, 2003): *interactive* because it allows for the creation of relationships and bonding among participants and between participants and the medium, and *varied* because the different communication tools available (chat, e-mail, discussion groups, video-conference) lead to the establishment of different patterns for communication dependent on the synchronous or asynchronous mode employed (voice, audio-visual images, data, etc). The participants get to practise a range of strategies to deal with information understanding and production for their field of studies / future jobs. In this scope, we must bear in mind that rather than information exchange networks, the networks involved in the learning process are communication networks, i.e., networks for interaction among users, which entails various perspectives for analysis, reasoning, summarising, discussing, etc.

The possibilities opened up by the tools to access real communication contexts, even interaction between native and non-native speakers, lead to the view that such e-communication media are significant for the enhancement of learning in LSP. As Cabero (2003) explains, one of the most important advantages in the use of Moodle as a key way to facilitate collaborative work is that it favours self-access and autonomous learning, but also allows for multiple logging and user-interactivity within a given group of students and/or with more people from other courses or projects, other teachers, tutors, etc. In this scope, LSP learning may be promoted through participation in shared academic/socio-cultural experiences and communities (cf. Jeon-Ellis, Debski & Wigglesworth, 2005). In addition to the provision of such resources for cooperative development in the tasks, the platform can include tools for the individual improvement of skills and micro-skills (e.g., pronunciation of sounds, words, phrases, sentences, etc).

The following resources and tools are categorised according to their potential attractiveness and motivation for oral communicative and linguistic skills. In addition, some cases are briefly explained in the LSP classroom and blended courses where such media demonstrate significant learning conditions.

3.1 Visual appeal for oral comprehension and production

Multimedia filter. This filter can embed links to enable audio files, video, and Flash-based animations within the default player so that listening and viewing can be achieved without having to download the files or install a given type of player. For instance, in order to set up a video on a Moodle page, we just need to upload this source on the platform and create a link for it. Consequently, a player can be automatically displayed from the web for the viewing. This multimedia filter is included in the standard installation of Moodle, but is not set up by default. As a result, the administrator of the given page in Moodle will have to have activated the filter previously. In Figure 1, a contrastive view is shown with the same content: on the left-hand side this content lacks the multimedia filter (i.e., only links are displayed in this type of context) while on the right-hand side, the filter has been activated, which enables the viewing of the links directly on the web page itself.

Multimovie filter and block. This feature also enables the insertion of videos from different web providers (youtube.com, google video, metacafe.com, etc) within any web page in an easy manner. In this way, we can access a huge amount of audio-visual resources in any language to be inserted in our programmed contents. The multimovie filter facilitates this feature by adding a label to a text block; this label has the format [[mm:source:reference|title]], where "source" is the original source from where the video is obtained (e.g., youtube), "reference" is the video reference to be shown, retrievable from the page where the video is stored, and "title" represents any title we may wish to give to the video. In turn, the multimovie block makes the video viewable within a Moodle block in such a manner that the video can be highlighted via a main screen in the Moodle course.

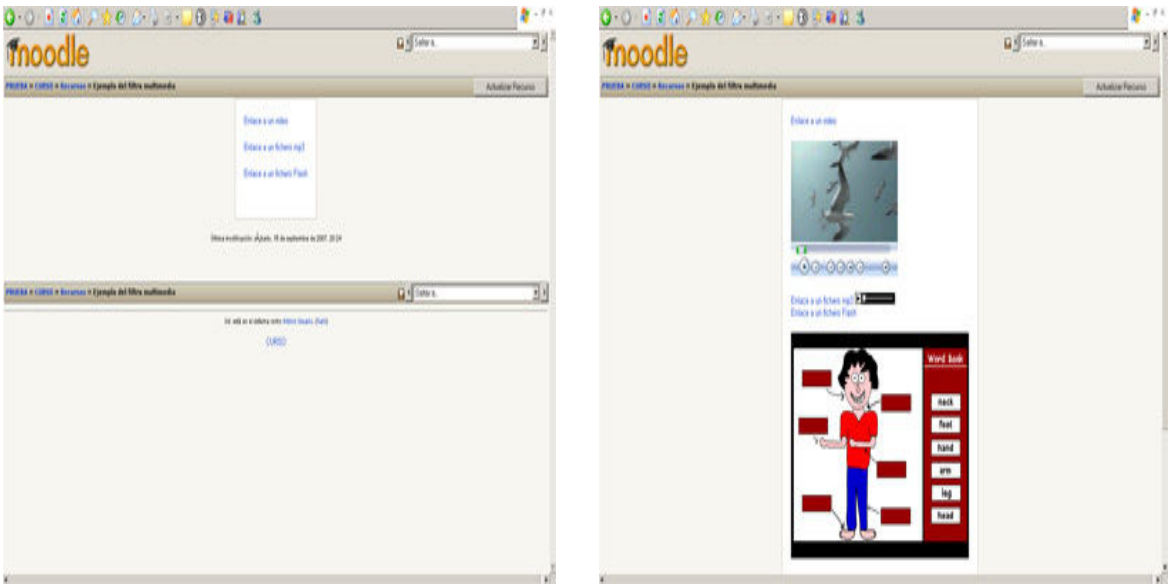

Figure 1. The multimedia filter activation (on the right) versus its default non-activated state (left) for web content viewing.

The inclusion of the multimedia and multimovie filters favours the direct interaction with the output from the platform. In our second year Computer English course, the blended course material contains many examples of the use of such filters. These activities are provided with five- to seven-minute videos from youtube, metacafe, or other video providers on the web. For instance, an Introduction to Computer Science lecture, given by an American professor, parallels our own introduction in the Computer English classroom. In this case, we watch the video in class, embedded in the Moodle platform, and ask the students some general questions related to both comprehension and content knowledge (e.g. "why does the speaker say Computer Science is not about computers...? / What do you think about this introduction? Is it easy to follow? Why? etc"). The point here is to motivate some minutes of oral analysis and processing of information as well as reasoning and discussion. To some extent, the students´ own schemata (i.e., previous content knowledge and ideas; cf. Swales, 1990) are brought to the fore and encouraged for use in oral discussions. Then, the video, stored in the blended course, is assigned as online homework, accompanied by more specific questions for comprehension (i.e., the idea is that students also work on this source on their own to reinforce linguistic knowledge and oral comprehension skills).

3.2 A focus on oral comprehension

Podcast. The concept of *podcasting* refers to the creation of sound files for their distribution by means of RSS files, which enables subscribed users to download and play them according to specific interests and needs. The files can be either listened to directly from the web (Figure 2) or downloaded on the PC by using applications such as iTunes or even saved on portable/mobile devices (e.g., iPod).

Figure 2. Interface for a podcasting activity.

SCORM module. A SCORM package is a web block made up of material according to the SCORM (*Sharable Content Object Reference Model*) standard for learning objects. These packages can contain web pages, graphics, Javascript programs, Flash presentations, or any other application to be functional with a web browser. This SCORM module enables the easy uploading of any standard SCORM package created with an external tool so that it can be made suitable content for a given course. The package can be used for the exchange of content among different platforms.

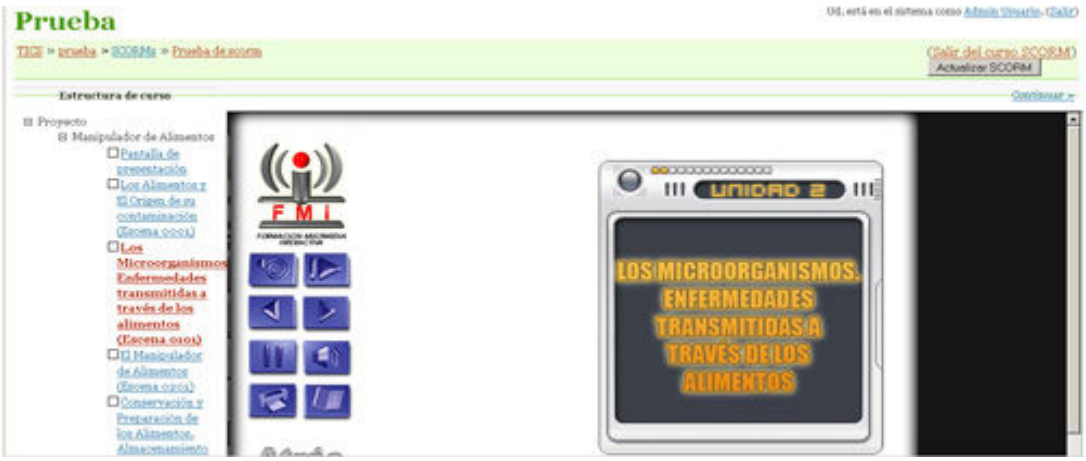

Figure 3. Example of SCORM activity

The use of podcast and scorm packages in the blended course can improve oral comprehension skills. These modules can be exploited in the case of theoretical background comprehension. An example is our third year Telecommunications English course, in which a long lecture about quantum physics can be provided as part of a larger lesson in a SCORM package. The lecture integrated in the lesson originally comes from the Michigan Corpus of Academic Spoken English (MICASE, freely available on the web). The advantage is that, together with the lecture, the transcript can be downloaded and added to the lesson. As part of the oral comprehension task, a home-made quiz may be supplied (e.g., a gap-filling exercise for words missing in the transcript, a matching activity with synonyms from key words in the lecture, etc). Thus, again, both content and linguistic knowledge are exploited on the platform.

3.3 Direct oral interaction

MoodleSpeex voice recording tool. This module allows for the recording of digital oral messages via tools that can be integrated in discussion forums. The main purpose is to enable the recording of voice for information to be administered by the teacher (as a prompt message) and followed by students (who, for example, respond to the message left by the teacher or by other students). The development is thus similar to that of a standard writing forum, with the difference that, upon choosing the mode for communication, the audio feature can be selected and, instead of a text box, a small sound recorder will show up (Figure 4), allowing for voice recording. The

messages are stored in SPX form and can be listened to directly from the platform. Both the sound recorder and player are implemented by means of Java applets (i.e., the JAVA plug-in is needed in the Operating System for proper functioning).

Audio/Video Conferencing and Recording of Audio for Evaluation modules. The COVCELL project (see the bibliography) is developing different tools for online FL teaching and learning via Moodle, allowing for oral communication among any potential users to set up conversations by using videochats.

Recording of Audio for Evaluation deals with the recording and capturing of students' audio for their corresponding evaluation by the teacher. There is also the possibility of a shared whiteboard that permits graphical explanations in collaboration with the students. Although this project is currently under development, we deem its use and exploitation as important for key elements in specific communicative tasks in which learners must not only work collaboratively and orally, but also according to concrete needs for their work with LSP (e.g., to conduct field work on a specific topic related to their studies, future profession, etc). For such aims, both specific academic writing and oral skills are demanded and tested.

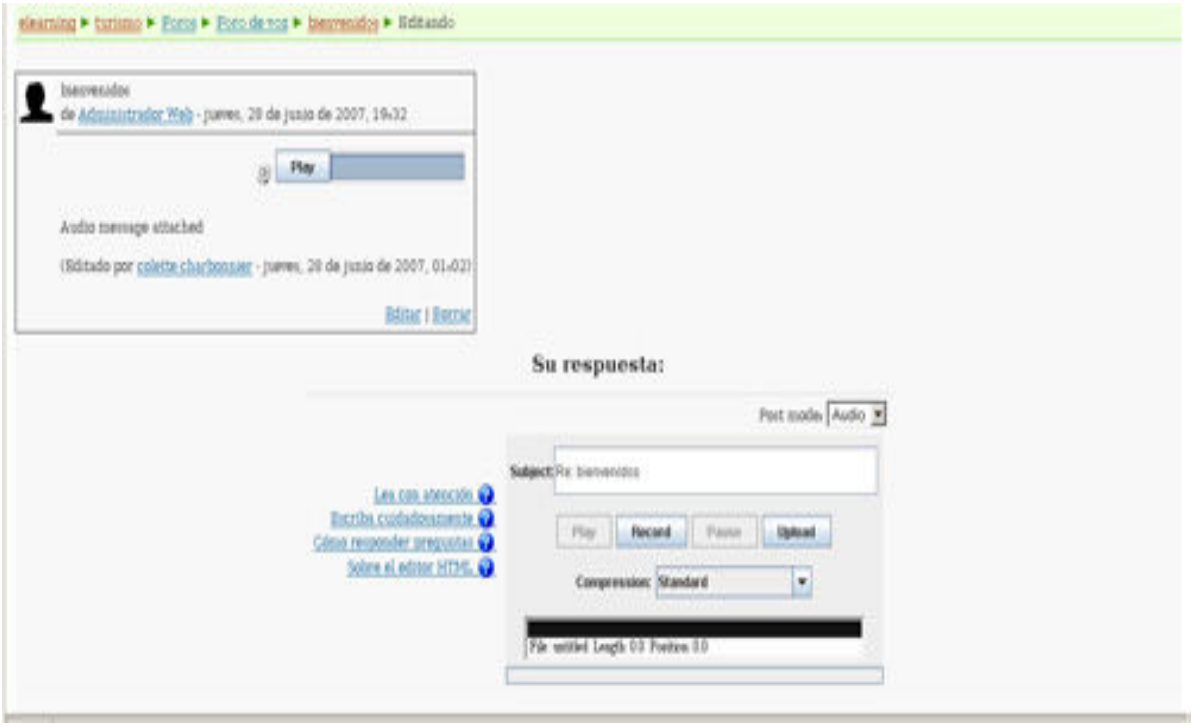

Figure 4. Interface (MoodleSpeex voice recording tool)

In our blended courses for Computer and Telecommunications English, we discuss socio-technical topics by asking students to leave voice messages that address specific issues. One such activity is the one- to two-minute oral delivery based on critical thinking and opinions. For example, the students first have to watch different embedded commercial advertisements that may be more or less controversial socially and ethically. Then, they have to prepare a short speech on their reflections

and ideas, which are left in the forum. In general, the task motivates them to leave more than one message, as they listen to each other agree or disagree on the various topics.

3.4 A focus on pronunciation

Gong project. This project (see the bibliography) enables the recording and listening of audio files by means of a Java applet (Figure 5) in a forum-like form in which the existing unfolding conversations can be trailed, with the possibility of adding consecutive messages to the conversation. This is an asynchronous tool that allows for the evaluation of the students in an effective way since it provides a speed control function to regulate the pronunciation rate at which the sounds are recorded. This resource has been used in our blended course as autonomous work for pronunciation improvement. The language instructors in charge of supervising the task often answer with comments and corrections on the input provided.

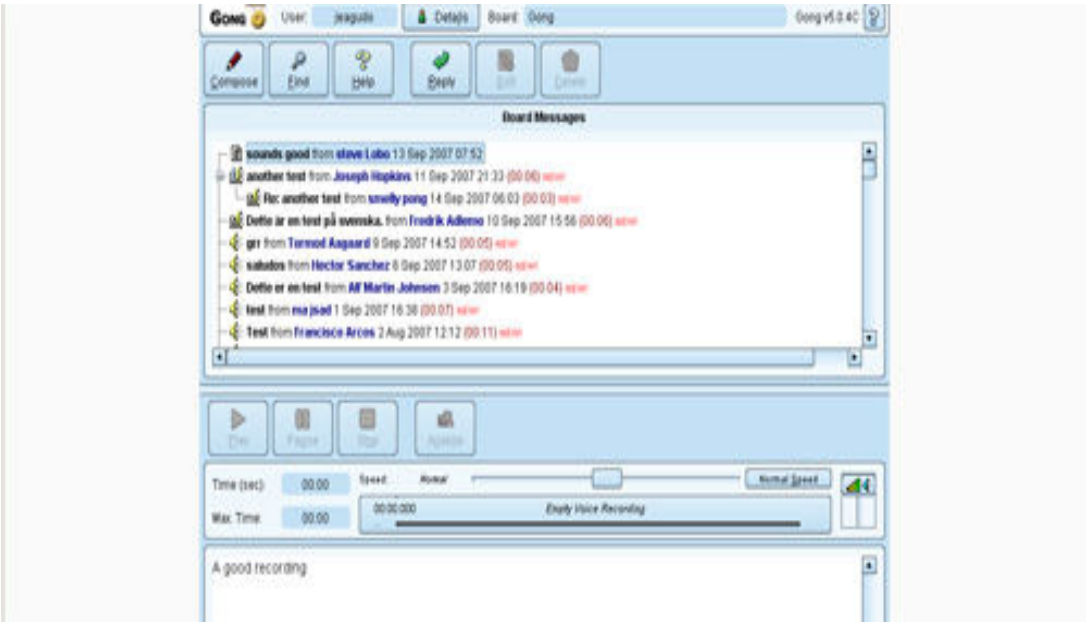

Figure 5. Gong voice board in Moodle

AIRE project. This project is currently under way at Polytechnic School of the University of Extremadura. The aim is to enable the integration of a speech recognition tool in the Moodle platform for specific task development. The tool "AIRE" has been chosen for this process (developed by the "Voice recognition group" at this centre; see the bibliography) as it adapts to file formats used with the HTK (Hidden Markov Model toolkit), especially convenient for Moodle systems (cf. Villamil Espinosa, 2005). The chief goal is to "feed" the tool a reduced number of lexical items via a voice trainer with which to be able to allow students to practise and master specific vocabulary (e.g., technical words related to their studies, academic expressions, etc). These words, if mispronounced, may cause unfortunate misunderstandings in conference paper and/or seminar audiences, etc; as a result,

their direct practise on the speech recognition tool (to be implemented in the platform) is considered important for LSP courses.

3.5 Individual and collaborative oral assignments

Other resources. Finally, there are other resources in the Moodle platform that can be exploited for oral work. One example is the option to upload videos as assignments (a limited capacity of 50 Mbs, but can increase to 100). This task is especially useful for seven- to 12-minute presentations where learners can show their own video projects (including multimedia-based abilities) to illustrate a specific topic (e.g., related to their studies). Again, Moodle facilitates teachers' direct comments and evaluation of the tasks privately. Computer Science students are likely to work with such tools effectively and to enjoy their management, according to our teaching experience.

Another example is the collaborative work with wikis and glossaries, where audio-visual material may equally enrich the learning process. We find that this type of work, in collaboration with the teacher, who acts as moderator/supervisor of the content, is useful for both material development and assessment progress. Figure 6 shows an example of audio files used with glossary entries in this case.

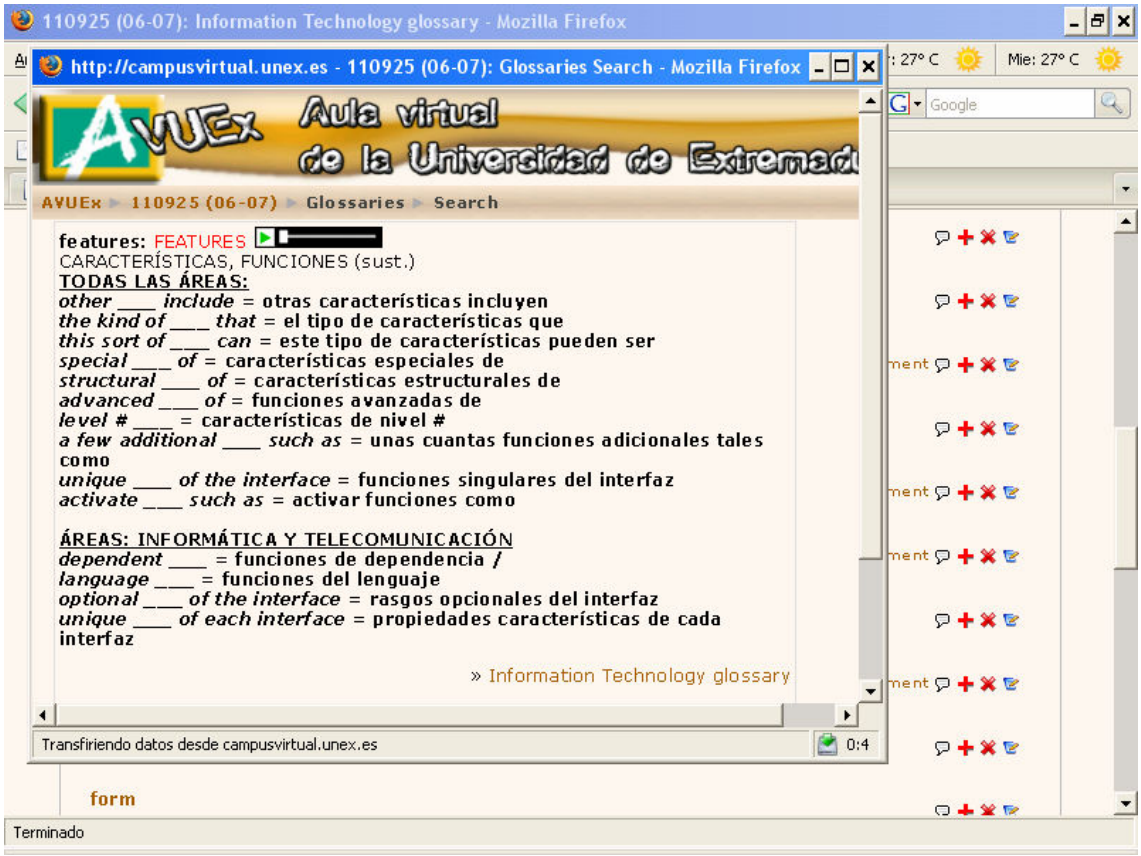

Figure 6: Glossary entries being managed and created with the aid of audio files

4. Conclusions and future developments

As observed, one can have access to various resources for oral development in Moodle. The exploitation of both linguistic elements and discourse-related interaction in communicative tasks and speech exercises is not only possible but greatly encouraging for the planning and design of oral interaction in these environments. There are already enough possibilities for the application of resources to oral LSP development in Moodle according to the various educational stages and FL levels. In addition, the applications can be tailored and adapted in such a manner as to be able to flexibly cope with demanded tasks and production in blended courses (in which requirements may be made for completely online work, integrated semi-online/face-to-face class-work, occupational aims, academic purposes, etc).

Most oral communication tools and resources are still under development, and so subject to significant improvement. There are also technical obstacles to be overcome, such as installation, compatibility among versions, differing browsers, etc. Other issues to research are the mentioned features of voice recognition (e.g., computational cost), real-time conversation speed, effective online means for correction and evaluation, etc. Thus, there are many paths to possibly explore and exploit for technological and pedagogical enhancements.

Investigating oral development for LSP in Moodle can also follow specific academic/professional requirements at the European level. The Common European Framework of Reference for Languages by the Council of Europe has established the basis for multilingual contexts in Europe where properly taxed linguistic levels/competences are made homogenous according to scales from beginner (A1) to most proficient (C2). These qualifications are required for active and effective participation in society and the labour market in traditional settings and distance/virtual environments for education and training.

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