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## **Developing a learning platform for AVT: challenges and solutions**

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### **ABSTRACT**

The implementation of the Bologna process across Europe has meant a shift in university teaching methodology and practice. While the focus was previously on lectures, the new system proposes more active methodologies, with an emphasis on new technologies. This new paradigm has created the need to offer new learning environments. This is primary the aim of AVT-Lp (Audiovisual Translation Learning Platform), a software system developed at the Universitat Autònoma de Barcelona (UAB) to foster autonomous audiovisual translation learning. This article presents this platform and discusses the main challenges that were faced and overcome during its development. These difficulties were experienced at three different phases of the project: while devising the initial platform design, while developing the platform, and during system testing.

### **KEYWORDS**

Audiovisual Translation, e-learning, EHEA (European Higher Education Area), didactics.

### **1. Introduction**

The implementation across Europe of the Bologna process, which aims to create a European Higher Education Area (EHEA), has resulted in a shift in university teaching. While the focus was previously on lectures, and students were often assessed by means of final exams, the new system promotes more active methodologies combined with continuous assessment, with an emphasis on new technologies. Student workload, which is measured by means of the new European Credit Transfer System (ECTS), involves not only lectures but also group and individual tutorials as well as self-study.

This new paradigm has created the need to offer new learning environments. As students are encouraged to learn by means of tutorials and self-study, new platforms created with this aim in mind need to be developed. The field of Audiovisual Translation (AVT) is no exception and lecturers should provide students with the appropriate tools to acquire the necessary skills and competences.

Many pedagogical projects have been developed in the field of AVT. As put forward by Matamala (2009), the literature on AVT and didactics, with Díaz Cintas (2008) as the seminal work in this area, essentially concerns itself with three main topics:

- presentation of courses on AVT, with contributions by Brondeel (1994), Gottlieb (1994, 1996), James (1995, 1998), Agost and Chaume (1996), Chaume (1999), Bartrina and Espasa (2001; 2003), Díaz Cintas and Orero (2003), Sponholz (2003), Pereira and Lorenzo (2007), Kruger (2008), Matamala (2008), Toda (2008), among many others;
- technology and AVT, with articles by Chaume (2003), Santamaria (2003), Matamala (2005), Matamala (2006), Taylor (2009), and
- AVT and foreign language teaching, some of the main researchers being Díaz Cintas (1995), D'Ydewalle and Pavakanun (1996, 1997), Baldry (2002), Danan (2004), Neves (2004), Gambier (2007), Araújo (2008), Caimi (2008), Díaz Cintas and Fernández Cruz (2008), and Pavesi and Perego (2008).

Our interest lies in the presentation of courses and resources which include a technological component and do not view students as passive receptacles of information but as active contributors to their own knowledge acquisition. In this regard, Amador, Dorado and Orero (2004) present a new learning environment developed for the AVT on-line course at the UAB. This course allows students to develop personal autonomy and acquire new professional skills by taking responsibility for their learning decisions and by managing their own time and learning process. Bartoll and Orero (2008) focus on a specific module within this course and describe how students learn to subtitle on-line. Bartrina (2009) also outlines how subtitling is taught in a virtual environment, in this case at the Universitat de Vic. In addition, Santamaria (2003) describes the specific software package developed at the UAB for AVT teaching, whilst Chaume (2003) describes how technology can be included in the teaching of AVT in a face-to-face environment. Matamala (2006) describes how technology fits transversally into the different modules offered at the MA in AVT at the UAB.

Despite all previous projects dedicated to this field, no software tools were specifically designed for self-learning in the new EHEA for AVT. This is the objective of AVT-Lp (Audiovisual Translation Learning Platform), a platform developed at the UAB by a team comprising engineers and translators with the financial help of the Catalan Government.<sup>1</sup> This paper aims to briefly present this tool (see also Arumí et al, 2010) (section 2) but, more importantly, to discuss the main issues that have been encountered and overcome during the development of the platform (section 3).

These include:

- issues found during the initial requirements definition and design phase: eliciting the requirements of both lecturers and students, and selecting the AVT transfer modes and challenges students have to respond to;
- issues found while developing the platform: creating a user-friendly interface that meets the previously established requirements; selecting the videos to be included in the platform as exercises, and converting these videos to the right format;
- issues found while testing the platform: technical issues while performing various tasks.

The description of these issues as well as the solutions applied in this project can provide useful information for future projects involving the development of learning tools in the field of audiovisual translation and related fields. It must be stressed that this article does not aim to provide a comprehensive view of all the phases generally found in a software development project but to summarise the main issues encountered from the translation team's point of view. In this regard, when dealing with the software development phase, we focus on issues that affected the team of researchers in Translation rather than the engineering team.

## **2. AVT-Lp: main features of the platform**

AVT-Lp is a learning platform with two user profiles: lecturer and student. The former access the platform to upload exercises, while the latter use it to improve their skills as audiovisual translators. Both profiles have a dedicated homepage, where the following common features are shown: personal data, simple and advanced search, and history. The uploading function and the statistical information are exposed only for the lecturers' profile (figure 1). Each of the features is briefly described below.

## Home

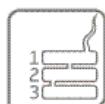
---

### Workspace

Main links and references...



**Personal Data**  
[...if you want to modify your personal data](#)



**History**  
[...list of videos that you have worked with](#)



**Simple Search**  
[...start browsing AVT modalities](#)



**Advanced Search**  
[...if you don't find what you are looking for, try the advanced search](#)



**Upload**  
[...upload another exercise](#)



**Statistics**  
[show the statistics of your exercises](#)

### Your Exercises

[Point Break\\_prueba](#) (Point Break\_prueba)   
Director: Kathryn Bigelow Source Language: {English,ENG}  
AVTModality: sourceFile  
[2009-09-30 09:38:12.0]

**Figure 1. Platform homepage (lecturers' profile).**

- **Personal data** (available both to students and lecturers): new users are asked to introduce certain personal data (first name, last name, e-mail, password, location, date of birth and profile type) in order to create a new account.
- **History** (available both to students and lecturers): this function shows a list of the videos lecturers or students have worked with. In the lecturers' profile it is possible to select one of the videos and upload a new exercise based on this video, and edit or delete an exercise already prepared for this video.
- **Simple and advanced searches** (available both to students and lecturers): in simple searches (figure 2), students browse for videos which allow them to practice one of the previously defined AVT transfer modes: dubbing, subtitling, voice-over, audio description, subtitling, subtitling for the Deaf and Hard-of-Hearing (SDH). They can also use keywords to find an exercise.

## Simple Search

  [Advanced Search !](#)

### AVT Modalities

Browser clips in the following modalities...



**Dubbing**  
[...list of videos for self-directed work on dubbing](#)



**Subtitling**  
[...list of videos for self-directed work on subtitling](#)



**Audiodescription**  
[...list of videos for self-directed work on audiodescription](#)



**SDH**  
[...list of videos for self-directed work on subtitling for the deaf and hard-of-hearing](#)



**Voice-Over**  
[...list of videos for self-directed work on voice-over](#)



**Other**

...

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**Figure 2. Simple search.**

In advanced searches (figure 3), students can look for a video by different means. There is an option ("Find clips that have...") that allows users to enter key words or an exact wording or phrase. If students want to narrow their search, they can directly select the source and target languages and the AVT modality they want to work with. It is possible to select more than one modality at the same time. Students can also choose the difficulties they want to address, which are dependent on the AVT modality and include a wide array of possibilities, as discussed later in this article.

## Advanced Search

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### Find clips that have...

all these key words:

this exact wording or phrase:

 [tip](#)

one or more of these words:

 OR  OR  [tip](#)

### Narrowing your search...

Source language:

 [▼](#)

Target language:

 [▼](#)

Search within a certain modality:

- Dubbing
- Audiodescription
- sourceFile
- Other
- Voice-Over
- Subtitling for the Deaf and Hard-of-Hearing
- Subtitling

(You can choose more than one modality at the same time)

### Challenges to work with...

(You can choose more than one challenge at the same time)

<input type="checkbox"/> Visuals: objects	<input type="checkbox"/> Humour	<input type="checkbox"/> Language: onomatopeia
<input type="checkbox"/> Language: interjection	<input type="checkbox"/> Visuals: introducing characters	<input type="checkbox"/> Visuals: gestures
<input type="checkbox"/> Didascalia	<input type="checkbox"/> Describing sounds	<input type="checkbox"/> Language: historial variation
<input type="checkbox"/> Language: proper nouns	<input type="checkbox"/> Identifying characters	<input type="checkbox"/> Mistakes
<input type="checkbox"/> Language: slang	<input type="checkbox"/> Shot changes	<input type="checkbox"/> Language: terminology
<input type="checkbox"/> Speed/Rhythm	<input type="checkbox"/> Language: wordplay	<input type="checkbox"/> Synchronisation
<input type="checkbox"/> Other...	<input type="checkbox"/> Visuals: actions	<input type="checkbox"/> Language: colloquial language
<input type="checkbox"/> Visuals: credits	<input type="checkbox"/> Adlibs	<input type="checkbox"/> Visuals: costumes, props
<input type="checkbox"/> Language: dialects	<input type="checkbox"/> Comprehension	<input type="checkbox"/> Describing sounds
<input type="checkbox"/> Language: formal language	<input type="checkbox"/> Culture	

Results per page:

 [▼](#) [▼](#)

[Search for clips now...](#)

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### Figure 3. Advanced search.

In both cases results are presented in a screen that includes (figure 4) the name of the video, technical information associated with the video, the source language and AVT modality as well as the date and person who uploaded the exercise.

## Search Results

### [Cashback\\_04](#) (Cashback\_04)

Director: Sean Ellis Source Language: {Spanish,ES}  
AVTModality: **Dubbing**  
[2010-01-22 10:32:53.0]

### [Crash\\_01](#) (Crash\_01)

Director: Paul Haggis Source Language: {Spanish,ES}  
AVTModality: **Dubbing**  
[2010-01-25 09:37:49.0]

### [Garden State\\_01](#) (Garden State\_01)

Director: Zach Braff Source Language: {Spanish,ES}  
AVTModality: **Dubbing**  
[2010-01-25 09:46:33.0]

[Transmedia Catalonia - Centre de Prototips i Solucions Hardware-Software - Universitat Autònoma de Barcelona](#)  
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**Figure 4. Search results.**

After having searched and chosen the exercise to work with, a screen appears with various data: a number which identifies the video, the video or film title, the source and target languages chosen, the AVT modality, the name of the uploader, additional data such as the release year and the film director, and some associated challenges. When performing the exercise, students can view the video online or download the video in *MPEG* format, and they can also download the original script. Once the exercise is finished, students can view the broadcast version of the video, as well as download it in *MPEG* format and download the broadcast version script.

Clip ID : 22

Title: Garden State

Source language: English  
Target language: Spanish  
AVT Modality: Dubbing  
Uploader: paula.igareda@gmail.com

Year: 2004  
Director: Zack Braff  
Challenges: Language: colloquial language  
Culture  
Synchronisation  
Other...

#### Instructions of the Exercise:

Traduce el siguiente clip para el doblaje de inglés a castellano teniendo en cuenta aspectos como los diferentes acentos, el lenguaje coloquial, los nombres de los objetos, etc.

#### \* Pedagogical feedback...

[Click here to get some feedback!](#)

**Figure 5. Working screen.**

- **Upload:** when uploading an exercise, the lecturer has to fill an electronic form with all the metadata needed to retrieve the exercise. These elements include: film title, release date, director's name, context of the video within the film, keywords related to the video, and which of the pre-defined AVT challenges is found in the selected video (see figure 3). As well as including all this data, the following files have to be uploaded:

- (a) the video, in both *FLV* and *MPEG* formats (see 3.2.);
- (b) a file with the transcription of the video in its original version;
- (c) another file with the transcription of the video that was broadcast in the target language, which is offered as an example to students;
- (d) some instructions to guide students before starting the exercise, and
- (e) a pedagogical feedback that students can download in order to compare the lecturers' observations and recommendations with their own results.

- **Statistics:** Using this feature, lecturers can see how many exercises and videos they already have and how many students have worked with these exercises as well as the number of times they have been downloaded.

In conclusion, AVT-Lp is a powerful tool that allows students to search for exercises to practice various AVT transfer modes autonomously by means of either simple or advanced searches. The platform provides a great deal of additional information to foster self-learning such as a pedagogical feedback and sample translations (both written scripts and broadcast versions). The tool also includes a lecturer's profile which allows lecturers to upload exercises and manage the number of videos available.

### **3. Project Issues**

In order to achieve the function rich system that has been presented in the previous section, a number of issues were addressed and overcome during the project. These problems were encountered at different phases: while gathering the requirements and formulating the platform design (3.1.), while developing the platform (3.2.) and while testing (3.3.).

#### **3.1. Design Phase Issues**

When gathering the requirements and designing the system functionality, various issues had to be considered: what were the needs of the lecturers and students? What AVT transfer modes should be included in the platform? What features should the platform include? All these questions were answered with the help of the researchers involved in the project —

who took part in a brainstorming workshop at the beginning of the project—and also with the cooperation of lecturers from the MA in Audiovisual Translation offered at the UAB (MTAV), who were contacted both via e-mail and personally.

As for the identification of the defined list of AVT challenges, lecturers from the MTAV with wide experience both in training and in the industry were asked by e-mail to provide a list of difficulties students usually encounter in their courses. This list was then completed with personal interviews with the most experienced lecturers and discussed with all the researchers involved in the project. The selected AVT challenges include: (a) difficulties related to language issues, found in all AVT transfer modes, such as terminology, formal language, colloquial language and slang, dialects, historical variation, proper nouns, wordplay, interjection, onomatopoeia; (b) problems linked to visual aspects, usually found in audio descriptions, such as costumes and props, objects, action, introducing characters, credits and gestures, and (c) questions regarding the original product, such as understanding it, dealing with speed/rhythm difficulties, solving mistakes, (d) issues linked to specific transfer modes, such as identifying characters, describing sounds, didascalia (SDH), shot changes (subtitling, SDH), adlibs, synchronisation (dubbing), and (e) other general aspects such as cultural references and humour.

Regarding the audiovisual transfer modes to be included in the platform, it was agreed to concentrate on the three main traditional modalities (dubbing, subtitling, and voice-over), together with emergent modalities related to media accessibility such as subtitling for the Deaf and Hard-of-Hearing and audio description. These are the transfer modes taught at the MAs offered at the Department and Faculty of Translation and Interpreting.

Concerning the features of the tool, the researchers in Translation involved in the project prepared the initial functional design of the platform and created a web map and some sample pages. The project was then handed over to the engineers, who began the technical development of the web-based platform.

### **3.2. Development Phase Issues**

Once the project technical development began, the main difficulties were: developing a user-friendly interface that meets the previously established requirements, selecting the videos to be included as exercises in the platform, and converting these videos to the right format.

### **3.2.1. Developing a user-friendly interface**

In the first instance, it was our aim to create a user-friendly environment that would allow students to learn more easily and lecturers to upload exercises effortlessly. The interface needed effective pedagogy combined with reliable, easy-to-use technology (Nichols, 2008). This is why, following Nielsen (2003), the platform was designed in order to achieve both usability and utility. Usability deals with five key quality components each of which were taken into account: learnability (how easy it is to use the platform the first time), efficiency (how quickly tasks are performed), memorability (how easy it is to use it again after a period of not using it), errors (what errors users make and how they can recover from these errors), and satisfaction (how pleasant it is to use). Utility refers to the design's functionality: in other words, the platform does what users need. This might seem obvious but it was a point at issue all along the process because technological possibilities often exceeded our needs, and our main aim was to keep the system as simple (and useful) as possible.

On one hand, the platform aims at solving a need recurrently felt by lecturers: how to properly manage selected audiovisual materials. AVT lecturers typically expend a large amount of time and effort in obtaining audiovisual material and are also responsible for digitising, editing and transcribing the selected videos. Once used, these videos are often stored in a hidden folder on the computer system due to the lack of a common file management tool. Therefore, the platform was developed bearing in mind that lecturers would profit from an open and dynamic interface that would allow them to create and share compatible resources within a common platform. A protocol explaining how to create new videos was devised (see below). As part of the procedure, specific attributes were associated with each upload stating whether the video and its associated exercise should be made visible to students or should be added to the platform for storage/retrieval purposes only.

On the other hand, as mentioned previously, the tool aims to fulfil the students' need for a learning platform with clearly structured AVT exercises to practice autonomously. The platform is primarily addressed to postgraduate students taking an AVT course at the School of Translation and Interpreting at the UAB. However, its scope can also be widened to include students taking other courses, such as interpreting and foreign language, with some background knowledge of audiovisual translation. For instance, many interview excerpts included as voice-over exercises can also be used to practice simultaneous interpreting or respeaking, whilst many videos can also improve listening skills in a foreign language learning context.

### **3.2.2. Selecting videos and developing exercises**

Developing exercises was considered a priority task from the beginning of the project. An initial selection of films was made taking into account several issues: the suggestions made by lecturers and experts in AVT, the previously defined list of AVT challenges students would have to work with, the availability of films, the scarcity of DVD's with a full set of AVT transfer modes (voice-over, AD and SDH were especially difficult to find), and the availability of both target language versions included in the platform (Catalan, Spanish). The thorny international issue of audiovisual material copyright for educational purposes was also addressed but will not be dealt with in this article.

Once chosen, films were viewed in order to select scenes that could be used to practice a specific set of transfer modes and AVT challenges. It was essential to find self-contained scenes that could be easily understood even though the platform provides detailed contextual information to enhance comprehension. Then, videos were created (as explained below) and exercises linked to these videos were prepared.

### **3.2.3. Converting videos**

Converting videos was a time-consuming task that was carried out based on the engineers' technical advice. It was agreed to use freeware packages that run on all commonly used operating systems and computer platforms. The process was as follows: first of all, a decrypting software package known as DVD Decrypter was used to create backup disc images of the DVD-Video structure. Then, Avidemux, a free, open-source software application designed for multi-purpose video editing and processing, was used to create the videos students would watch as exercises. Next, in order to create some videos with subtitles, Handbrake, an open-source, multiplatform and multithreaded video transcoder, was used. This software allows the user to select chapters and burn subtitles into the picture. Finally, it was necessary to save the video in two different formats (.mpeg and .flv) so that students could download the video (.mpeg) and watch it online (flash video). As for the video in .flv, FLVTool2 was used: this software is a manipulation tool for Macromedia Flash Video files which allows the streaming motor to seek forward and backwards without the need for buffering.

## **3.3. Test Phase Issues**

It is normally recommended that usability testing is carried out as early as possible in the test phase. This testing was initially executed by the

software engineers, who performed some brief representative tasks and recorded the results. Once the initial problems were solved, a more comprehensive series of tests were carried out by researchers from the translation team: some of the testers had been closely involved in the development of the platform whereas others had only taken part in the designing stage and therefore could perform the role of inexperienced users. The results proved that the platform was efficient, almost fully functional and both easy and pleasant to use. However, some technical issues had to be resolved: some elements of functionality were removed as they were considered unnecessary, whilst other elements required additional development because they were not completely fit for purpose. For instance, it was necessary to create tutorials for lecturers dealing with how to upload new exercises and/or how to digitalise and index videos. Moreover, it was found that additional supporting documentation was needed to help users and that this information should be available from any page in the platform. It must be stressed that the interaction of translators and engineers all along the process proved highly interesting although it was sometimes difficult to match interests.

#### **4. Conclusions and future perspectives**

In conclusion, the aim of the project presented in this article was to create an innovative learning tool adapted to the new requirements posed by the Bologna process and, more specifically, a platform which encourages autonomous learning in the field of AVT. Issues arose throughout the project lifecycle —and overcome. At the initial design phase the project researchers together with AVT lecturers made a list of the main problems students usually encounter when translating audiovisual texts and selected the AVT transfer modes to be included in the platform. An initial design with some sample web pages was created by the team of translators and passed to the team of engineers. When developing the platform, the main issues encountered centred on technical issues (creating videos) and pedagogical issues (creating exercises) as well as implementing a user-friendly interface that would satisfy the needs of both lecturers (managing tool) and students (autonomous learning tool). Finally, the testing stage was used to identify any technical problems and to modify certain features and functions in order to enhance the platform usability.

As for future prospects, needless to say that further testing with both students and lecturers is needed before considering the application as completed. Moreover, it would also be highly interesting to increase the number of source and target languages as well as the number of exercises offered so as to reach a higher number of end users. This expansion would increase the learning possibilities of the platform and may of course raise new issues.

Another potential platform improvement would be the implementation of the so-called learning pathways. In other words, the platform could also offer a series of pre-created groups of exercises. These exercises would be used to target the improvement of certain skills relating to both transfer modes and AVT challenges, and they would be organised according to their degree of difficulty. For instance, students could choose to practice terminology in voice-over or slang in dubbing and they would directly access numerous exercises in an already pre-established order. Hence, apart from giving students some freedom in managing their learning process (simple/advance searches), students could have access to a series of guided activities (learning pathways).

Finally, demonstrating the platform in academic forums such as conferences or journals will hopefully raise interest in this tool and will result in an increase of users in the AVT field. As for other fields such as interpreting or technical translation, it is our belief that the platform could be either adapted to include other translation modalities or used as a model for future self-learning tools.

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