# Creating Multimedia Localisation Training Materials
## The Process and Resources Developed for eCoLoMedia

**Alina Secară, Centre for Translation Studies, University of Leeds, UK**
**a.secara@leeds.ac.uk**
**Pascaline Merten, Haute École de Bruxelles, Belgium**
**pmerten@heb.be**
**Yamile Ramírez, Universität des Saarlandes, Germany**
**y.ramirez@mx.uni-saarland.de**

## Abstract

We present the online resources developed as part of eCoLoMedia, a European collaborative project in the domain of translator training, the technology used in implementing its website and in localising project materials, and discuss the impact that the rise of entertainment and cultural industries has had in this field of translation. We analyse the results of a needs analysis survey carried out in 2008 by the Institute of Translation and Interpreting (ITI) and illustrate how the results of that study influenced the design and creation of materials. The aim of this project is to encourage trainers or individuals to gain knowledge in emerging translation fields and provide a chance for hands-on practice, be it in class or at home, using online materials on topics ranging from subtitling and voice-over to games and Flash localisation.

## 1. Introduction

Across the globe, the television and cinema sectors are becoming increasingly diversified. The market share of European films in Europe has grown from 20% in 1999 to 30% today[1], and their market share also shows constant growth in China, where 45% of films distributed are foreign. Moreover, video gaming is the fastest growing European content industry, with total revenues of €6.3 billion in 2006[2], exceeding those of cinema box offices. Yet these audiovisual products are impressive not only in terms of economic power, but also for their linguistic and cultural diversity, which requires them to undergo several localisation processes before distribution, involving specialist translators skilled in using specialised translation tools.

eCoLoMedia (*Vocational Training in Multimedia eContent Localisation: Developing shareable and customisable resources for vocational training in multimedia eContent localisation*), a Leonardo-funded project, brings together academics, professional associations, content developers and software developers to build online resources to respond to these identified needs in vocational multimedia translation training.

The following sections explain the project's journey, from the needs analysis carried out by ITI, and the design, production and localisation of materials, through to

---

[1] http://ec.europa.eu/commission_barroso/reding/video/20090511/index_en.htm
[2] http://ec.europa.eu/information_society/doc/factsheets/069-videogames-en.pdf

user evaluations. Examples of materials created and their localised versions in a variety of European languages - Flash clips, video and audio files and a game - are presented together with scenarios for their integration into vocational translator training. The activities we suggest are integrated with CAT tools, such as translation memories, terminology databases and subtitling software, and the use of standards such as XML is encouraged. Our objective is to demonstrate that multimedia localisation in the classroom is not only feasible but a thought-provoking and exciting way to bring traditional translation classes into the 21st century.

The courses and exercises developed are available free of charge on the project web site: http://ecolomedia.uni-saarland.de/ and are aimed primarily at trainers, students and professional translators who want to enrich and expand their activities and adapt to market changes. The resources cover the main multimedia areas: subtitling, captioning for deaf and hard-of-hearing, dubbing, audio and video voice-over and Flash and game localisation. For each of these domains, training kits are offered to support practical exercises, and more general learning scenarios are suggested.

## 2. Needs Analysis – summary of results

The needs analysis questionnaire was carried out at the beginning stage of the project, by ITI, among its members - translation trainers, industry (clients) and language service providers. The questionnaire took place between May 2008 and August 2008 with 54 respondents fully completing the survey. The questions were designed in such a way as to allow the respondents to select more than one option for every question.

The aim of the survey was to gain first-hand information on the existing knowledge, expectations and needs of the project's target audience. We wanted to create materials for integration into vocational training and needed information regarding the best way of introducing new audiovisual translation practices into the educational environment. The pedagogical approach that we would ultimately suggest had to allow for flexibility and cover as many scenarios as possible.

A direct consequence of the explosion of the media industry and the changing industry practices is that vocational translation training is required to embrace a wider variety of scenarios, integrating the use of ever more complex files, tools and adaptation techniques. Our survey[3] (**Figure 1**) confirms the presence in the industry of a variety of source file types handled in translation projects. Although translator trainers seem reluctant when it comes to integrating video, XML and EXE files in their teaching (**Figure 2**), there are a variety of file formats in use. The ratio of file types is comparable for the two respondent groups, that is clients requiring translations and translation trainers using different file types in their teaching, with text files (to include Doc) and HTML seeming to be the most popular, followed by XML, video and audio.

The numbers in the charts represent the actual number of respondents that chose that option.

---

[3] ITI eCoLoMedia Survey 26/08/08 http://www.iti.org.uk/indexMain.html
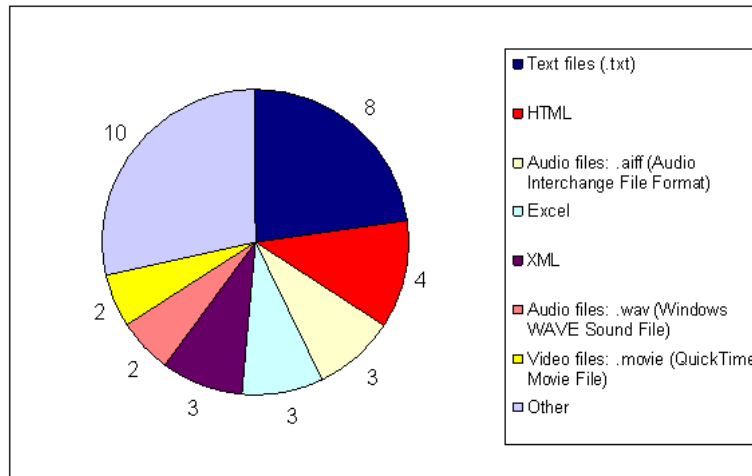
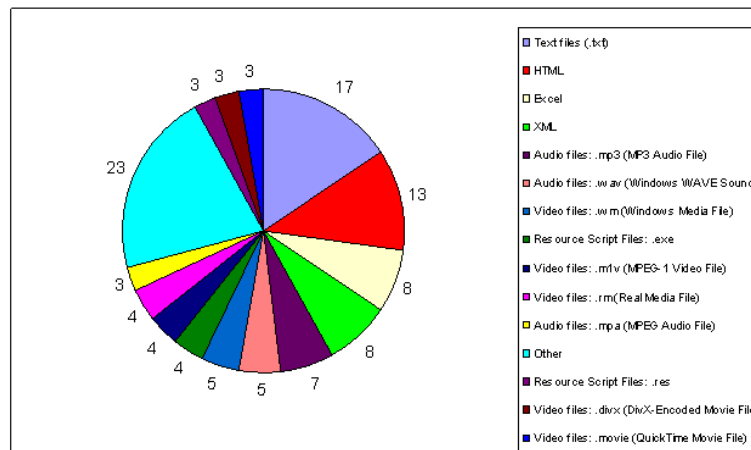Figure 1: Source file formats used in the industry

Figure 2: Source file formats used in translation training

Another aspect of our analysis was related to finding out about the training practitioners and trainers had been exposed to, in order to identify the areas where further training was needed. As detailed in **Figure 3**, the training undertaken by translation trainers varies greatly, but all areas from our survey were represented. As predicted, more established areas such as translation memory and terminology management are in the lead, with areas such as voice-over and subtitling still in their infancy, but nevertheless present.

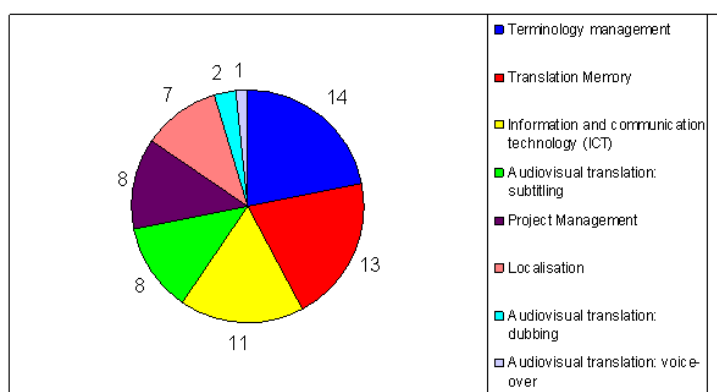**Have you attended any courses on the following topics?**



Figure 3: Courses attended by translation trainers

Finding out about the main difficulties translation trainers encountered when teaching translation was another area of interest. The most prominent problem identified, as detailed in **Figure 4**, was the lack of sample materials and guidelines. As audiovisual translation is a relatively new area, it was to be expected that trainers would need guidance and sample materials. Nevertheless, we had not expected that the availability of materials in a variety of languages, a central issue a few years ago, would now appear to have been almost completely overcome. This raised the expectations and need for our materials to provide not just resources but most importantly to assist trainers in efficiently integrating them in their teaching activities.

**What are the main difficulties you have encountered so far in developing your own teaching materials for your classes?**
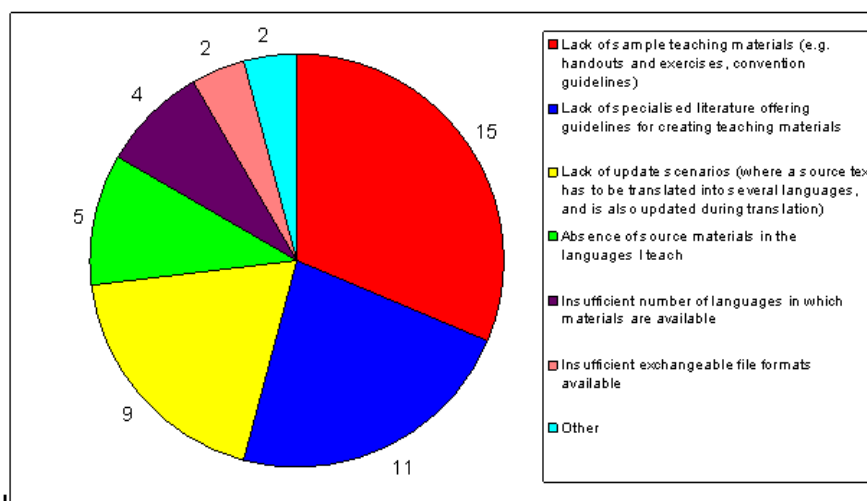


Figure 4:  Teaching materials development – challenges

The Internet was ranked as the most heavily used source for finding relevant training materials, followed by clients and TV channels.  As our materials were to be offered only online it was reassuring to see that this practice was already established.

Overall, the analysis made us more aware of the importance of creating clear guidelines and instructions to accompany the raw materials. Moreover, by drawing parallels between the industry sector, LSP and trainers, evidence suggests that some progress had occurred in the training sector, in that industry practices were being followed more closely. More translation types have entered the classroom and more

links between the three parties seemed to have emerged over recent years. Furthermore, trainers seem to acknowledge the need to move with the industry and provide in their teaching the variety that is found on the translation market.

## 3. The project resources

The eCoLoMedia goal was to offer relevant resources for trainers, students and professional translators to experiment with various aspects of multimedia localisation. In practice, this meant finding and preparing files representative of different modes and in various formats, localising them and uploading the resulting linguistic versions on the website, together with possible scenarios of their integration in a learning situation, be it online or face-to-face.

### Definition of the field

As shown in **Figure 5**, the scope of the multimedia field is vast. However, given the time and funding constraints operating on the development of the project, eCoLoMedia can deal only with a selection of materials. Priority has thus been given to those media (audio, video, Flash and videogames) and modes of linguistic transfer (subtitling, subtitling for deaf and hard-of-hearing, dubbing, voice-over) that can be realistically used in teaching scenarios. Certain combinations of media and linguistic transfer are presented as individual modules:

- audio and voice-over
- video and subtitling
- video and voice-over
- Flash and localisation of XML files
- video and subtitling for deaf and hard-of-hearing (SDH)
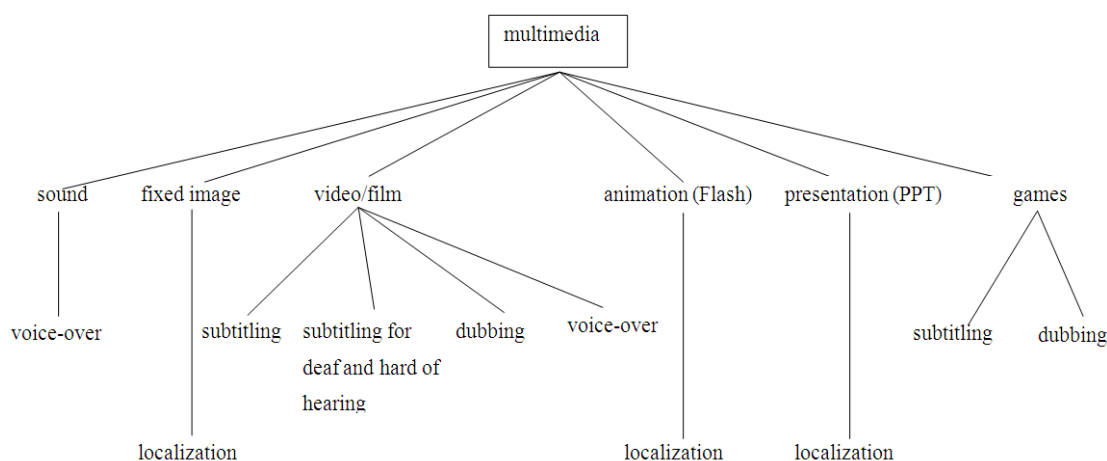- games and localisation of Excel and XML files



Figure 5: Multimedia translation field

For every topic listed above, three types of resources are provided online. First there are courses covering the theoretical background together with relevant examples in different languages. Secondly, exercises offering raw source materials in a variety of languages and their localised versions together with information cards and contextual information are provided. The third type of resource developed is the pedagogical guidelines, which aim to assist the users in integrating the courses and exercises into the learning process, in various possible scenarios.

## Finding realistic and suitable materials

We used materials from various sources or created raw materials ourselves as the copyright issues can make it difficult to find resources, especially games and Flash files.

      **Audio files:** We mainly used files available on the website of the Audiovisual Service of the European Commission (http://ec.europa.eu/avservices.cfm). The files are provided free of charge and cover current events in a variety of topics, from economic issues to environment and access services provision in the EU, which may require terminological research for the translator trainees.

      **Video files:** The Audiovisual Service also offers video files which were used, but we also benefitted from documentary films provided by academic partners, Leeds and Saarbrücken and by the Belgian Radio and Television Broadcaster, RTBF, in particular its scientific service that produces educational and popular science video materials.

      **Flash:** This was a more challenging task as most companies do not part with their resources and the freely available Flash clips were generally unsuitable. The solution was to adapt the code of some animations to our own purposes. For instance, one animation is provided both in the original version and in an internationalised version, with the translation having to be carried out in the Flash code in the former scenario while external XML files are handled in the internationalised version.
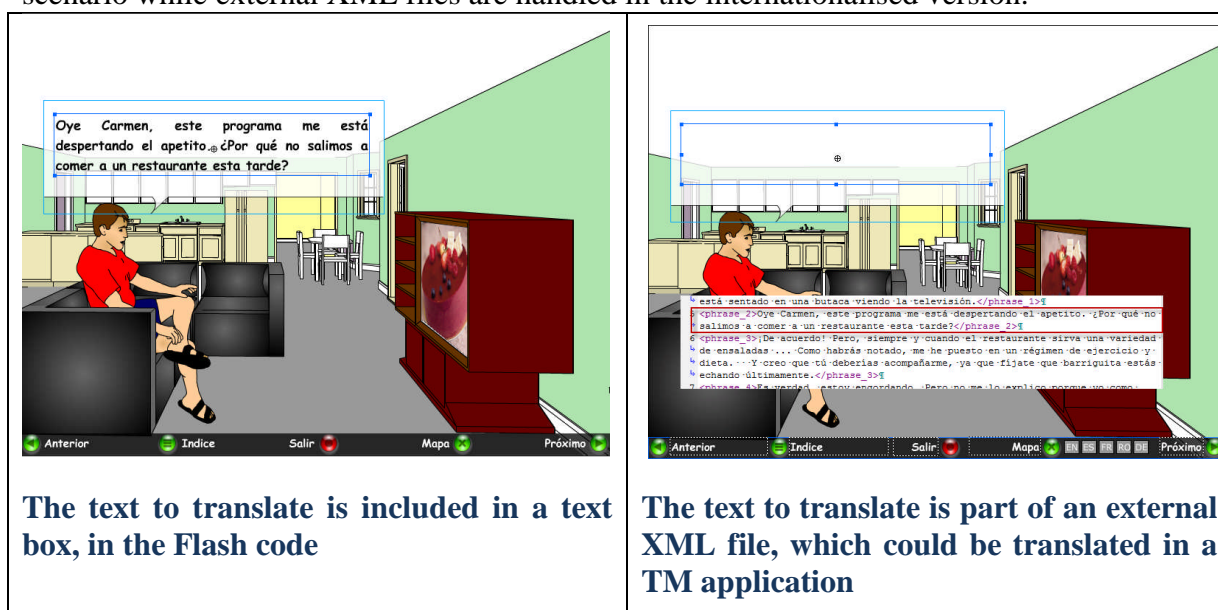


**The text to translate is included in a text box, in the Flash code**

**The text to translate is part of an external XML file, which could be translated in a TM application**

Figure 6: Internationalised VS non-internationalised Flash animation

      **Video games:** The game offered for localisation in the exercises was developed by computer science students and offered by one of the project partners, University of Pompeu Fabra, Barcelona.

      All materials are indexed by summary information pertaining to the format of the source files, their length and duration, the context of intended use, the domain they belong to and the relevant source/target audiences. The information cards containing this information are intended to alert users to the level of technical and translation difficulty that each set of materials involves; they also assist trainers in the selection of those materials best suited to the needs and abilities of their students.

      The multimedia files, information card and all necessary additional files (such as scripts) are zipped in a training kit. These training kits are used in the exercises part of each module to practise the concepts developed in the theoretical section.

**Preparing the files**

The preparation of the files for localisation and the demonstration of the translation process was carried out using free tools or demo versions of commercial applications. Compatibility issues were also tackled, for example in the subtitling module the videos are offered both in .avi and .mpeg formats, while the subtitles are in the proprietary format as well as in .srt and .ssa formats.

We also had to solve codecs problems and issues linked to presenting videos as examples in our courses. We decided to use Flash .flv files as it is a more compact format, more suited to streaming. We also had to take into consideration the end-users' IT specs and tried to create resources that would not be too heavy on the IT equipment. The exercise video clips were cut into manageable chunks, for example the documentary films of the RTBF, where 5-10 minutes clips were extracted. Pedagogically this is a useful thing to do as well, as specific language issues can be identified more easily in a shorter clip

Solving technical aspects was a time-consuming task, but the results meant that our materials could be used by a larger end user population.

# 4. Website design

Thanks to the valuable experiences gained from the previous eCoLoTrain project (*Developing Innovative eContent Localisation Training Opportunities for Trainers and Teachers in Professional Translation),* 2005-2007, the design and implementation of the eCoLoMedia website was achieved successfully in very short time.

Since the main deliverable of the eCoLoMedia project is its website, as a platform for making freely available all the materials developed during the project, special emphasis was placed on its design. According to the original concept, it should be a user-friendly, easy-to-navigate, consistent, and clearly structured site. It should contain not only text with images, but also Flash and video animations, and all this in three different languages: English, French and German.

**Technology used - TYPO3**

The use of a content management system for the implementation of the eCoLoMedia website was determined by the nature of the project: a multidisciplinary team of professionals from different countries, speaking different languages, having different holidays, working together on the same deliverables and having deadlines dependent of each other.

TYPO3 is an open-source content management system, which allows the creation, management, control and publication of multilingual content on the Web. It makes it possible to separate content from layout and navigation. TYPO3 is implemented in PHP and uses Apache web server and MySQL database.

In the planning phase of the project, TYPO3 was set up and configured. UTF-8 was the chosen encoding for the web server and database, as it supports all required characters. In TYPO3, the rights for authors, translators and reviewers were assigned, different types of content elements where defined (for text, text with image, multimedia, etc.) (**Figure 7**), as well as different website design templates and style sheets to determine the display of content when writing (Zielinski, 2008:53).
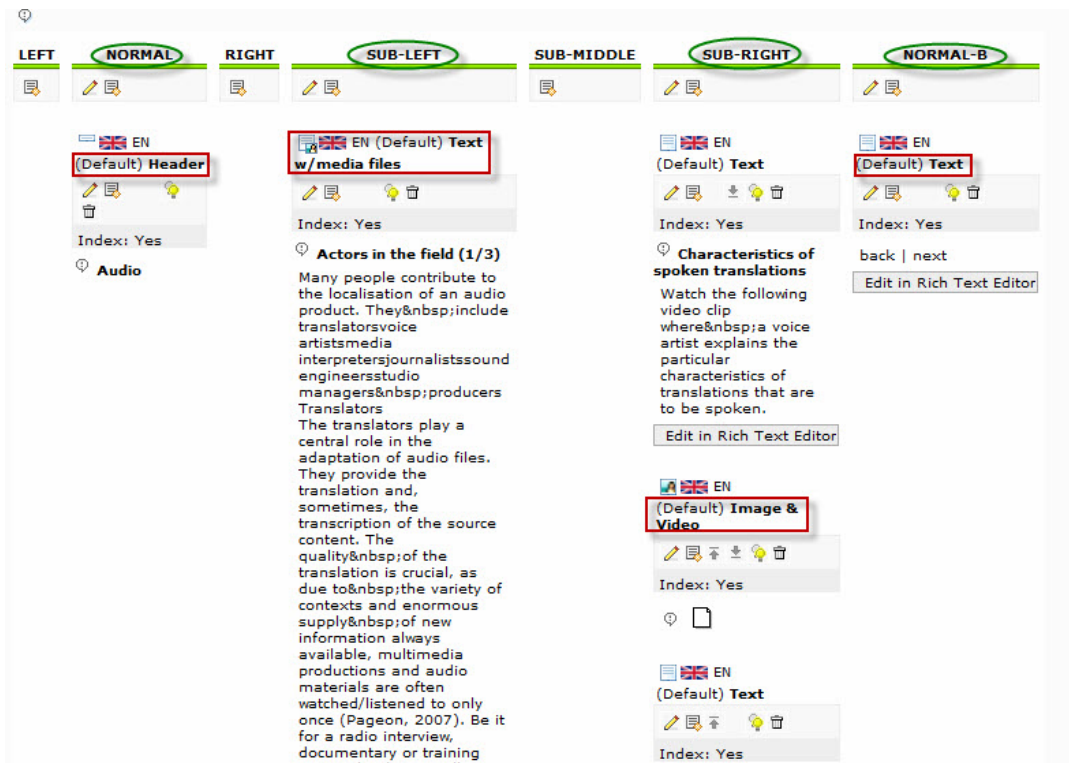
Figure 7: Different types of content elements (header, text, text with media files) in red and their distribution on the webpage (normal, sub-left, sub-right, normal-bottom) in green.

During the content creation phase, TYPO3 was used for creating the project's web pages in the three different project languages, EN, DE and FR. It was also the platform used for creating news and updating it constantly and interlinking contents between all the project's pages, as a platform for an intranet exclusively for partners to share online content and writing guidelines, as a document repository for file management and for exchanging materials among content developers.

TYPO3 also allowed online editing and proof-reading of the source materials in English, using a track changes functionality that ensured consistency across languages in terms of translation. For example, if the English source pages were modified (e.g. extra text, links, images or animations), the changes were immediately flagged up in the corresponding pages of the other languages, so that authors, translators or proof-readers could update the contents according to changes.

It also made direct online translations possible (directly in the system); for example, when only a few words needed to be translated or a small portion of text was updated. Additionally, by using its extension, the Localization Manager (l10nmgr), it was possible to manage successfully the whole localisation process of the TYPO3 database content by automatically exporting the database translatable content and importing the translations back.

## 5. Localisation of contents

From the beginning, it was clear that different localisation workflows would be needed to localise the different translatable content on the website. The eCoLoMedia website contains:

- Visible web pages - offering general information (about the project, its goals, partners, etc.) and specific information (courses, exercises, guidelines on different topics in multimedia translation)
- Training kits - offered as ZIP packages with the exercises and containing sample multimedia files (such as video clips, audio extracts, Flash animations or games extracts) in several languages, to be used for practising different types of multimedia localisation (voice-over, subtitling, Flash localisation, etc.). Training kits can also contain scripts for video or audio files in MS Excel or MS Word and MS Excel tables with the text strings extracted from Flash animations or games.
- Documents stored on the TYPO3 file system - example of these are the information cards as MS Word files.

Regarding the localisation workflows, all visible web pages of the eCoLoMedia site in English - that is to say all database translatable contents - were first identified by localisation managers and then exported via the l10nmgr for translation as XML files. Since translation memory systems were to be used for translation, setting files for different systems were also automatically generated with the l10nmgr. Then the source XML files in English were translated into French and German by translators and translation students using SDL Trados, and were proofread by translation trainers and translation students. The translated XML files were then re-imported into TYPO3 with the l10nmgr and hidden by localisation managers, to be once again proofread and tested online before publication (**Figure 8**).
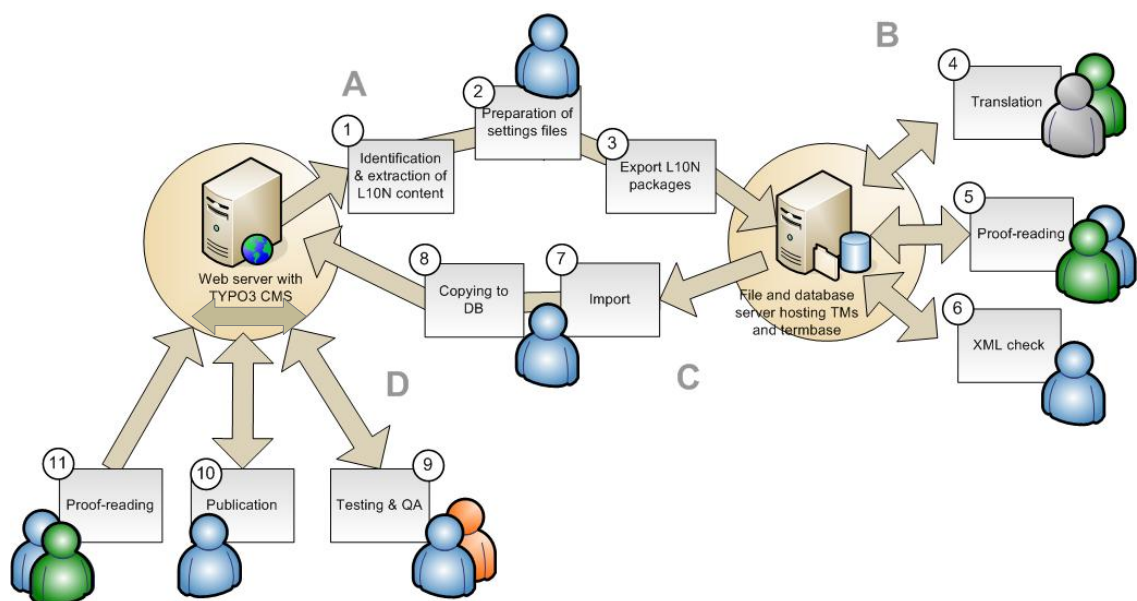


Figure 8: Database content localisation workflow in eCoLoMedia

For the localisation of the training kits, a different workflow was introduced. As mentioned before, the training kits contain mainly sample multimedia files for exercising different tasks with different difficulty levels. The objective is to introduce different challenges in multimedia localisation such as technological challenges related to file formats and software, and linguistic, pragmatic and cultural challenges.

The source sample files used for the training kits were original materials, with a few exceptions where localised versions are used as source materials (e.g. in the

Flash and Games localisation modules). For each kind of medium (audio, video, Flash, etc.), at least one file in at least one source language such as English, French and German is provided. Mostly, target files are provided in all six project languages: English, French, German, Romanian, Spanish and Polish.

The technology associated with the exercises and localisation of training kits included: computer aided-translation tools (CAT tools) to translate several different file formats such as XML (e.g. SDL Trados, Across, Déjà Vu), XML editors (e.g. Open XML Editor), audio editors (e.g. Audacity), subtitling and captioning software for localising video (e.g. VirtualSubSync, Spot, Subtitle Workshop), software to burn subtitles into video (e.g. Ripp-it After Me, VirtualDubMod or Media Coder), Flash software for localising Flash (Creative Suite CS3 or CS4), graphic editors for localising images (GIMP Image Manipulation Program), conversion software such as encoders and codecs to convert file formats (e.g. Adobe Media Encoder, AVS4YOU, Super), among others.

It is worth noting that the tools suggested to perform the exercises are mostly freeware, open-source software or demo versions of commercial software. In addition, exercises and training kits are, with a few exceptions (e.g. the Flash module), tool-independent.

The process of localising the training kits gave eCoLoMedia partners a great opportunity to go through all online exercises, to follow the steps as any other user would and test the proposed tasks. As a result of this localisation workflow, not only were localised versions in all six project languages produced but, more importantly, feedback from partners regarding the online exercises and the training kits could be gathered and later on integrated.

## 6. The Pedagogical model

The main target group of the eCoLoMedia project consists of teachers and trainers in vocational translation. The second target group includes translation students and professional translators interested in developing further skills.

From a pedagogical point of view, if an individual uses the Internet to learn, he is in a situation of online learning. A trainer can use online resources in a face-to-face class, modify the online resources to suit a particular training need or direct the students to access the resources online to achieve a particular learning objective. The use of a combination of online and face-to-face learning is now known as blended learning. We envisaged this to be the optimum way for trainers to integrate our materials into their learning and teaching.

Historically, using online resources and platforms was associated with ways of coping with the increasing number of students in a classroom (Sandrelli and de Manuel Jerez, 2007). Blended learning was also identified as creating a shift from a teacher-centred teaching to a trainer-centred model (O'Hagan, 2008). A strictly online approach has some drawbacks, the main one being that the learners cannot immediately ask questions and receive answers (Shuttleworth and Ford, 2008).

The eCoLoMedia methodological principles are aimed at explaining and illustrating the different ways the trainers can use or reuse the project materials. The guidelines explore the scenarios (online, face-to-face, blended), the aims (covering theoretical concepts, enhancing translational skills, teaching of complex file types and CAT tools), the learning environments (home activity/class activity; individual/group activity) as well as the evaluation methods (quiz, peer to peer, comparison of solutions).

Depending on the length of the course, student background and level, number of students, etc. the trainer will use the eCoLoMedia materials and teaching scenarios differently. The guidelines direct the users in choosing the most relevant project resources to fit their teaching or learning situation. They also offer relevant information on further websites offering free materials as well as tips to create new teaching/training files.
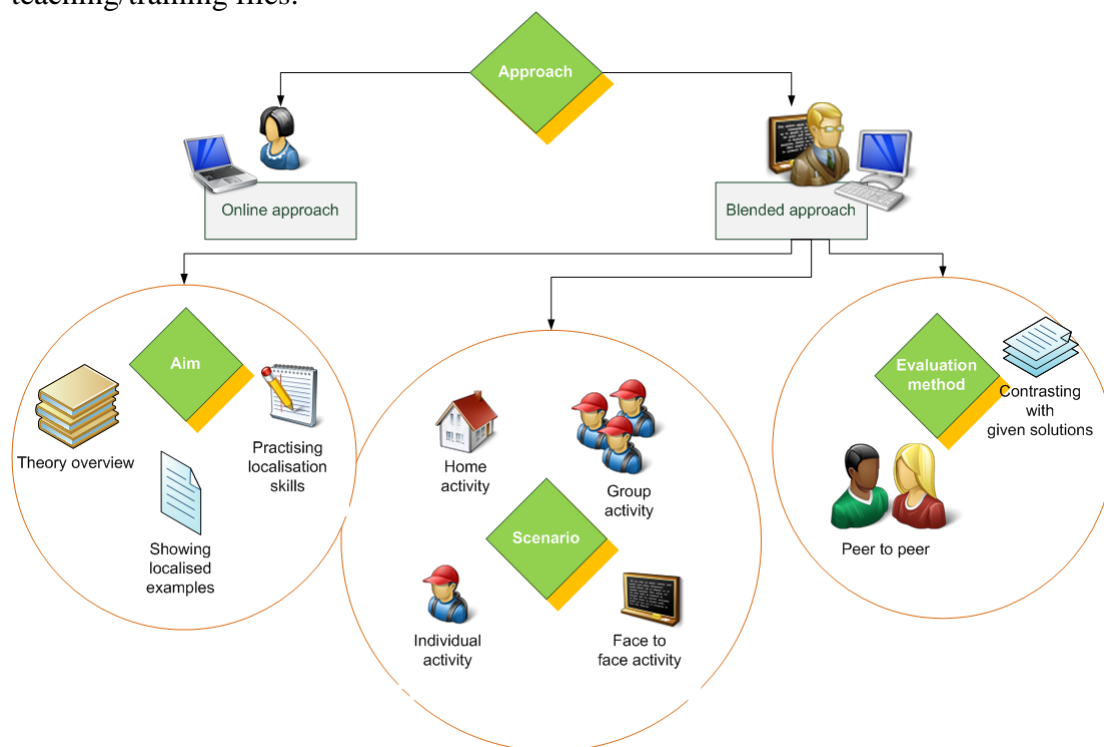


Figure 9: Design of the eCoLoMedia Pedagogical guidelines

To illustrate how the eCoLoMedia methodological guidelines can be used, let us explore the following scenario and some of its possibilities. Let us imagine a translation teacher who wants to integrate subtitling in his specialised translation course. His course is given in English and subtitling should be done from foreign languages - such as French, German, Spanish and Polish - into English. The teacher goes through the eCoLoMedia subtitling course and exercises in their English version, and decides to use a blended approach for his course.

There are three objectives of his course:
- to give an overview of the theoretical subtitling concepts
- to provide examples of subtitling in different languages
- to offer possibilities to practise specific subtitling skills

In order to fulfil these different objectives, the teacher has several options for using the eCoLoMedia resources. For example, an overview of the subtitling theory could be given in a face-to-face scenario or assigned as an online student activity using the content from the eCoLoMedia online subtitling course. The online course and references could also be used as a starting point for the class on subtitling principles, without students having to go through the whole online course.

A second possibility for covering an overview of the subtitling theory would be to make the online theoretical course a home student activity followed by class discussions. This means, students would have to go through the online subtitling course at home, as a self activity. In class the teacher would then evaluate the theoretical contents by means of short presentations, quizzes, discussion, or by letting

students perform subtitling exercises in class and evaluate the results - which in any case would indicate if the theory has sunk in or not.

For the second objective of the course, providing examples of subtitling in different languages, the teacher can use the eCoLoMedia localised versions offered in the download sections of the subtitling exercises. Depending on the exercise, the teacher will find either English videos with subtitles in different languages (DE, ES, FR) or videos in several languages with English subtitles, which he can show to students in class.

As for the third objective of the course, practising subtitling skills, the teacher has again several options, with eight subtitling exercises being offered. The chosen exercises can then be solved by students either at home, individually, or in class as an individual or group activity. To evaluate the results of the exercises, the teacher can use a peer-to-peer evaluation strategy in class or the students together with the teacher can contrast their work with the already localised versions proposed by eCoLoMedia.

Finally, support is provided should the trainer wish to develop his own subtitling training kits. References to free videos databases, file conversion, copyright, software available are provided.

## 7. User Feedback

Throughout its life, the project materials have been appraised by a variety of user groups, ranging from academics and students to practitioners. The following section will detail the feedback on the Video (Subtitle) module and the Audio module. The two surveys on eCoLoMedia were completed by 22 undergraduate students and 17 postgraduate students enrolled in the 4th year and the postgraduate audiovisual translation courses respectively at Dublin City University (DCU). We will be concentrating on the postgraduate responses in this article. The exercise components were not covered by either group.

As all respondents had covered only the main concepts involved in subtitling audiovisual material in their studies prior to completing the feedback, they were perfectly placed to answer questions regarding the level of difficulty of the online materials. As mentioned above, the courses were aimed at beginners with knowledge of translation in general and good IT skills. The surveys were made available to the students via DCU Moodle with the eCoLoMedia link http://ecolomedia.uni-saarland.de/en/courses.html and were open to the students between 30 March and 24 April 2009. Each form contained 9 questions, including a final open comment section.

In line with the project's pedagogical perspective, this experiment was integrated in a blended learning approach, where students went through the eCoLoMedia materials to expand on topics covered in class.

The first survey focused on the subtitling module and the second the audio voice-over module. As seen in the tables below, we were interested in finding out about overall satisfaction and site design issues as well as subject-specific issues.

## Video (Subtitle) Module

(*Note – Many respondents ticked more than one box when answering questions 7 and 8.)

**Postgraduate students – total number of respondents = 17**

| Question # | Answer | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|
| | NA | Strongly disagree | Disagree | Agree | Strongly agree | |
| 1. Clear objectives | - | - | - | 7 | 10 | |
| 2. Difficulty level | 1 | - | - | 10 | 6 | |
| 3. Topic sequence | - | - | 2 | 5 | 10 | |
| 4. Explanations | - | - | 1 | 6 | 10 | |
| 5. Relevance | - | - | - | 6 | 11 | |
| 6. Satisfaction | - | - | 1 | 7 | 9 | |
| 7. Improvements | Better description | More examples | More explanation | Clearer objectives | Up-to-date Content | Better organisa-tion |
| | - | 8 | 5 | 1 | 6 | 4 |
| 8. Preferred mode | Face-to-face 4 | | Blended 11 | | Autonomous 4 | |

Figure 10: Video module feedback

## Audio Module

(*Note –Only postgraduates were surveyed for this module. Many respondents ticked more than one box when answering questions 7 and 8.)

**Tabled Results**

**Postgraduate students – total number of respondents = 17**

| Question # | Answer | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|
| | NA | Strongly disagree | Disagree | Agree | Strongly agree | |
| 1. Clear objectives | - | - | 2 | 6 | 9 | |
| 2. Difficulty level | 1 | - | 1 | 9 | 6 | |
| 3. Topic sequence | - | - | 1 | 9 | 7 | |
| 4. Explanations | - | 1 | 2 | 8 | 6 | |
| 5. Relevance | - | - | 1 | 10 | 6 | |
| 6. Satisfaction | - | - | - | 10 | 7 | |
| 7. Improvements | Better description | More examples | More explanation | Clearer objectives | Up-to-date Content | Better organisa-tion |
| | 2 | 8 | 5 | 3 | 4 | 4 |
| 8. Preferred mode | Face-to-face 4 | | Blended 10 | | Autonomous 5 | |

Figure 11: Audio module feedback

The data in the two tables and the content extracted from the open comments section shows overall satisfaction. There seems to be general agreement that the level is acceptable for beginners and that more experienced practitioners can also benefit from certain sections.

In terms of improvements, the need for more examples was stressed together with that of providing more explanations. We acknowledged these shortcomings and therefore integrated more examples and explanations in the courses that followed. Particular issues arise from the difficulty of maintaining the website up-to-date in an ever-changing domain where technological advancements occur regularly. The website's content is only going to be updated throughout the life of the project. Nevertheless, technological changes aside, we consider that the main principles and

techniques applied in the field are likely to remain the same/very similar to present practices. Because of this, we believe that the site's contents will remain usable, even if a different technological platform/software/workflow might be necessary.

## 8. Conclusions

We have presented the resources created within the eCoLoMedia project, the platform used, the pedagogical approach and the survey and feedback exercises. As highlighted in the first section, as the obstacle for trainers now is not so much a reluctance to acquire ICT skills as the persistent difficulty of obtaining illustrative multimedia samples (e.g., film or game sequences) and the time-consuming preparation of multimedia files and corresponding learning scenarios, our project's aim was to bridge this gap by providing both the raw resources necessary and the pedagogical scenarios for their integration in teaching or self-learning scenarios.

      The training kits made available comprise files in different formats from different sources including television and independent producers, illustrating technical challenges (what codecs to install when using subtitling software), linguistic challenges (how to translate so as to adapt speech to written text), together with the pragmatic (how to render paralinguistic information in video materials for deaf and hard-of-hearing audiences), and the cultural questions (how to deal with culture-specific terms in video games).

      The pedagogical perspective taken regarding the use of the materials, that of blended learning which relies on combining online and face-to-face activities to enhance the learning experience, makes the integration of resources in teaching more flexible. Technology played an important part in our project and the open-source, tool-independent approach we adopted may enhance the potential for the resources to be used by a variety of end-users. We are aware of the shortcomings of the website, with its content maintenance impossible after December 2009, but believe that the resources provided and tips to produce further materials will ensure website traffic even after the end of its life.

## Bibliography

eCoLoMedia  http://ecolomedia.uni-saarland.de/

European Commission Audiovisual Service (http://ec.europa.eu/avservices.cfm).

European Commission Statistics
http://ec.europa.eu/commission_barroso/reding/video/20090511/index_en.htm
http://ec.europa.eu/information_society/doc/factsheets/069-videogames-en.pdf

ITI eCoLoMedia Survey 26/08/08 http://www.iti.org.uk/indexMain.html

Nix, M. Et al. (2005) *Web Content Management: CMS verstehen und auswählen.* Software & Support Verlag GmbH. S&S Pockets. Frankfurt - Germany.

O'Hagan, M. (2008) (2008) 'Film Translation Networks: An Accidental Training Environment?', in Kearns (ed.), *Translator and Interpreter Training*: Issues, Methods and Debates, London, New York: Continuum: 159-183

Sandrelli, A. and J. de Manuel Jerez (2007) ' The Impact of Information and Communication Technology on Interpreter Training', *The Interpreter and Translator Trainer* 1(2): 269-303.

Secară, A., P. Merten and Y. Ramirez (2009) 'What's in Your Blend? Creating Blended Resources for Translator Training', *The Interpreter and Translator Trainer* 3(2): 275-294.

Shuttleworth, M. and D. Ford (2008) 'Developing a 12-week e-learning course on software localisation at Imperial College London: design and insights from student feedback' in Proceedings of Aslib Conference, November 2008

Zielinski, D. (2008) 'Website localisation: challenges, processes, workflows.' In: Dimitriu, R. and Freigang, K-H. (eds): *Translation Technology in Translation Classes.* Institutul European. Seria Traductologie: 41-57.