Teaching a Foreign Language to Deaf People via Vodcasting & Web 2.0 Tools

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Abstract. This paper presents the design and development of an e-learning course in teaching deaf people in a foreign language, whose first language is the sign language. The course is based in e-material, vodcasting and web 2.0 tools such as social networking and blog The course has been designed especially for deaf people and it is exploring the possibilities that e-learning material vodcasting and web 2.0 tools can offer to enhance the learning process and achieve more effective learning results.

Keywords: e-material, vodcasting, web 2.0 tools.

1 Introduction

Nowadays we are talking about Education 2.0, an umbrella term which includes also the use of Web 2.0 tools in education [1],[2] . This term describes the transformation that technologies brought in education. In the time of e-learning 2.0 where the delivery of courses is mainly taking place through learning management systems new trends have emerged in e-learning such as the use of social networks, wikis, and blogs [3].

All over the world universities, organizations, enterprises use these trends in non formal and even formal learning. For example Cambridge, Oxford, and Yale universities have their own content in iTunes such as lectures, teaching materials, interviews with leading academics [4]. Web. 2.0 tools enable more collaborative and creative learning, scaffolding and the development of new competences by the learners. There are didactical models that fit e-learning and also ICT tools that implement the learning theories such as online mind maps which also can be synchronously collaborative [5]. Vodcasting which is a visual medium supports better deaf people, as they know better the sign language than the written language, and it's easier for them to watch a lecture in sign language than reading a long text [6].

The use of blogs enhances learning as it allows its beginning by the time the learners start their active participation as collaborators for a common purpose. More and more educationalists adopt the use of weblogs in teaching and learning. Blogs, have proved to be a versatile and useful tool that enhances not only learning but also the development of social skills. The use of blogs enhances learning as it allows its beginning by the time the learners start their active participation as collaborators for a common purpose [7].

Social networking has also emerged as a major trend in education, which led to the creation of the term "Educational networking" [8],[9]. One of the largest socials networks like Facebook for example is used in education by teachers as a day-today tool. Social networks in education encourage students to present their own thoughts, provide effective communication and collaboration, enhances students' learning experiences and build an online learning community [10], [11],[12].

The work presented was designed and developed in the framework of the E.U. lifelong learning project "Enfora" which is a transfer of innovation project. During this project, design and pilot e-learning courses were conducted which were delivered in Romania, Italy and Greece, in each partner/country own language and sign language.

2   Methodology

The method followed for the delivery of the pilot training courses, is blended learning. The course consists of 40 instructional hours, where 15 hours are delivered face to face, and 25 via e-learning lessons and vodcasting. The e-learning lessons are tailored to ESOL.

For the delivery of the lessons delivered a Syllabus has been created by special education pedagogists. For every lesson conducted, the structure and content that has to be delivered by the trainers as the didactical goals have been described based on the curriculum of the courses.

In what concerns the e-learning lessons, every module of the e-learning material contains videos in sign language which explain the purpose of the material to be studied or explaining a quiz or an exercise. The video player provides the ability to pause or replay the video [Fig. 1].
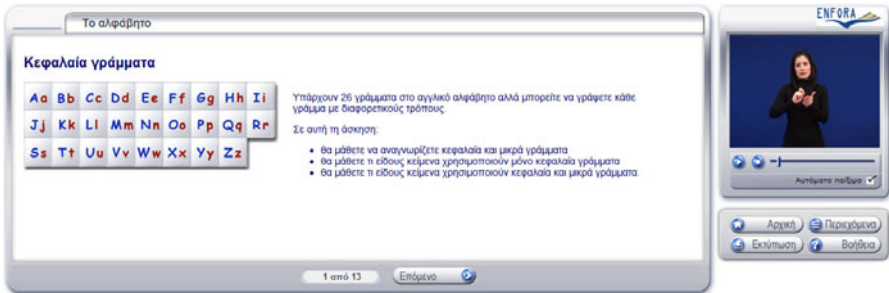

Fig. 1. e-learning module containing support video in sign language

The e-learning material is divided in the following main chapters: the alphabet and capital letters, adjectives and verbs.

The content and the didactical goals of the lessons which are delivered via vodcasting are also described in the Syllabus.

Via vodcasting were delivered 20 lessons with duration of 20 minutes each.

2.1   Syllabus

The Syllabus for the vodcasting lessons encompasses a range of training modules that need to be delivered according to the curriculum. An example of the Syllabus is presented below where the learners are going were taught the following in the 4rth vodcasting lesson.

Plural number of adjectives
This is… / These are
My / your
How old are you?
Happy birthday!
Games
Saying goodbye according to rime
Revision exercises

3   Implementation and Tools

The implementation of the vodcasting lessons are left to the creativity and the experience of every instructor, according to instructional design theories where the learning structure/scenario is separated from the e-learning material. There are many ways that trainers can exploit visual means. For example one can record a lecture in sign language, a desktop pc whiteboard, a PowerPoint presentation or even a Power Point presentation containing support and explanations in sign language videos.

A guide has been created for the trainers and the learners which describes which steps the trainers have to follow to create their own vodcasting modules. More information and help is provided by information provided by the web. More specifically,
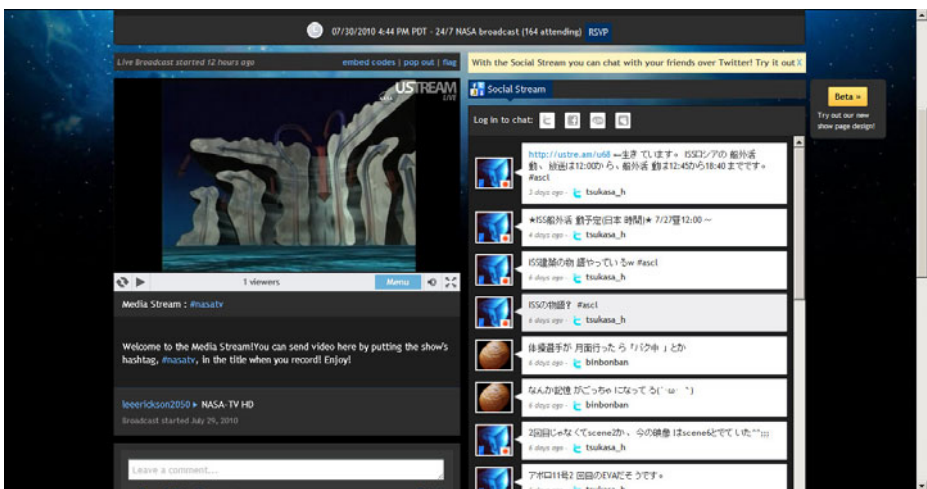

Fig. 2. Ustream example of educational vodcasting

in the guide as additional help a video from Vimeo is provided explaining in simple steps the creation of vodcasting modules, information from Wikipedia, and video vodcasting tools and hosts. For the hosting of the vodcasting tools the Ustream hosting service has been chosen [Fig. 2]. Ustream provides the ability to stream an already recorded video and also to enable recorded mode making the video available also asynchronously after the streaming session [13].

A social network has been creating using Ning online platform, which also hosts an Education 2.0 network concerning ways of using web 2.0 tools in education [14], [15]. The trainers and the learners participating in the pilot training courses as other people participating in the project (coordinators, managers, and scientific specialists) are participating in the social network from every country partner of the project. The Ning platform offers among others chatting, blog and videoconference services, which have been used by the trainers and the learners [Fig. 3].

Fig. 3. The project's social network in Ning platform

Through the social network and the abilities that is providing such as the blog the trainers and learners describe their personal thoughts, post relevant issues, supportive educational content. For example the trainers asked the learners to describe their expectations from the use of the web 2.0 tools in the courses.

4   Evaluation

After the completion of the pilot training courses a questionnaire was delivered to the trainers/pedagogists in order to evaluate the teaching experience thought the LMS, and through vodcasting in several subjects, such as the content quality, the didactical approach and the interactivity, based on a Likert a scale, from 5=max to 1=min. The questionnaires are presented below in Table 1.

Table 1. The questionnaires for the evaluation of the teaching via the LMS and vodcasting

ASYNCHRONOUS TEACHING VIA LMS EVALUATION AXES
CONTENT QUALITY
1.   The content is devoid of national and racial stereotypes
2.   The content is suitable for the age and level of the students
3.   The content is suitably designed for the disability of the students
4.   The Sign Language is suitable for the level of the students
5.   The structure of the information and the presentation follow uniform rules
DIDACTIC APPROACH
6.   The didactic objectives of the material (courseware) are apparent from its use
7.   The structure of the didactic material is simple and easily understood by the student
8.   The navigation through the various modules is understandable
9.   The organization of the material allows the student to adapt the learning flow according to his/her needs
10. The material covers all the learning modules with examples and activities
11. The material encourages learning
12. The examples and the exercises are designed according to the characteristics of the students and incite their interest

Table 1. (*Continued*)

13. In the case of a mistake, the material provides suggestions to the student in order for him/her to find the correct answer
INTERACTION QUALITY
14. The images and symbolic representations are understood and suitable for the students
15. The feedback that the material provides is substantial
16. The navigation aids of the system are satisfactory
17. There is the possibility of exiting the system wherever the user may be
MULTIMEDIA ELEMENTS
18. The clarity of the texts on the screen is satisfactory
19. The quality of the images is acceptable
20. The quality of the Sign Language videos is acceptable
21. The speed of the Sign Language execution is clear
SYNCHRONOUS TEACHING VIA VIDEO PODCASTING EVALUATION AXES
CONTENT QUALITY
1. Do you believe that the method that you use is compatible with the students' disability?
2. Do you believe that the video podcasting method helps towards the adaption of the material according to the characteristics of the students?

Table 1. (*Continued*)

3.   Adequacy of time for the development of the several modules
4.   Successive development of the various modules
DIDACTIC APPROACH
5.   Fulfillment of coverage of the educational material for the ESOL starters level
6.   The material encourages learning

The questionnaires were answered by 3 Greek trainers, 3 Italian trainers 3 Swedish trainers and one Romanian trainer.

In what concerns the quality of the teaching through the LMS, and the content quality axe the evaluations were from all trainers were found between the scale of 4 and 5. In what concerns the didactical approach the score was generally high apart from the questions 9,10, 12,13 regarding the suggestions to a student in case of a mistake, the organization of the material regarding the learning flow and the design of the of the examples and the exercises according to the characteristics of the learners. In these questions the average score was 3.

In the interaction quality axe the general score was high apart from the question 15 regarding the feedback provided, the average score was 3. The quality regarding the axe of the multimedia elements was high with an average of 4.

The vodcasting questions were about also the didactical approach and the quality of the content. The content of the quality of the vodcasting lessons, was generally high with an average score of 4,25. Regarding the didactical approach the average score was 4, for the questions relevant to the coverage of the educational material for the ESOL starters level, and the encouraging of learning.

5   Conclusions

During the past few years, online initiatives such as, projects and services became perceived as especially connective, receiving the rubric of "social software": blogs, wikis, trackback, podcasting, video blogs, and enough social networking tools. Web 2.0's lowered barrier to entry may influence a variety of cultural forms with powerful implications for education, from storytelling to classroom teaching to individual learning.

Of course web 2.0 tools are not an LMS themselves. but can provide great learning effectiveness when used supplementary [8]. In what concerns the trainers of deaf people we can conclude from their answers in the corresponding questionnaires that these tools can support deaf peoples' learning effectively and also encourage learning.

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