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INSTRUCTOR TRAINING RESULTS IN THE MOVE-IT PROJECT

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ABSTRACT

This paper presents some achievements of the project entitled „Innovative Tools and models for Vocational Education and Training in Central and Western Romania" (MoVE-IT) financed by EEA financial mechanism. It has the priority to develop human resource through promotion of education and training, by means of distance learning. The results for participants evaluation, course and instructor evaluation after two instructor training sessions organised for teachers from "Petru Maior" University of Târgu-Mureş are presented.

Keywords: innovative tools and models, training session, smart board, video conferencing

1. Introduction

Two partner universities: "Petru Maior" of Targu-Mures in Romania and Sør-Trøndelag University College of Trondheim in Norway had an initiative to renovate the teaching infrastructure used in e-learning, and improve teaching quality, making it more adaptable to the Romanian labour market by arranging a new distance learning program in Central and Western parts of Romania.
This initiative is developed in the project „Innovative Tools and Models for Vocational Education and Training in Central and Western Romania" (MoVE-IT), financed by EEA mechanism [1].

2. The vocational training network

A high definition video network is constructed in the Central and Western parts of Romania, and organizations in 4 different towns may utilize the infrastructure to provide vocational education and training within the year 2011 [2]. The EEA financial mechanism has approved this project. During the first phase, "Petru Maior" University of Targu-Mures, will be the hub in the video network. It is an innovative project that aims to develop and establish a regional network of vocational education and training centres in Central and Western parts of Romania, by transferring knowledge, good practices and state of the art advanced video communication solutions from Sør-Trøndelag University College in Trondheim Norway. The results are going to improve the inter-institutional partnership between existing vocational training centres and UPM in the Targu-Mures region in Central Romania, by stimulating and improving the quality, accessibility and supply of vocational education and training services for further development of human resources.

The vocational schools are located in the towns Oradea (University Agora), Alba Iulia (Universitatea 1 Decembrie 1918) and Sighisoara (Colegiul National Mircea Eliade). The distances from the hub (Petru Maior University) and to the sites are from 60 - 225 km. The plan is to teach at least 1200 students and provide instructor training to at least 30 instructors within 2011. The video network is containing the following main components: a high standard dedicated video room at UPM, for delivery and distribution of vocational training to external partner sites by use of two-way videoconferencing and digital blackboards; video rooms at the 3 vocational schools in the region that is dedicated to receiving training from UPM or another organization that utilizes video in training; construction of at least one digital classroom, as well as two state of the art computer laboratories at UPM.

3. Training sessions

During the project we have developed and deployed instructor training through a dedicated instructor training program.

The objective is delivering a set of state-of-the-art training courses for trainers and teachers. This activity acknowledges that the key person to motivate the students is the teacher itself and this activity creates guidelines and examples on how to implement the new pedagogical training principles in education. These courses are of generic nature and have a cope of use far beyond vocational training itself. It is developed a limited amount of multimedia material for these courses.
During the project the following courses are planned:

1. Introduction to training delivery that utilize video communication, and Learning Management Systems for organizing course material, in vocational education. *This is a course targeting users that have little or no experience with video in vocational education and training*.
2. Pedagogical methods and use of video in vocational education and training [3,4]. *This course targets everyone that wishes to get an introduction and understanding of what video may offer as a distance training and learning arena for organizations offering vocational training. The goal of the course is to give the end-users basic knowledge in how to integrate various types of additional equipment into distance training situations such that they act professionally during the videoconference*.
3. Blended learning methods and optimisation of video in vocational education and training [5]. *This course contains two main components:*
   A) The first part of the course try to give basic understandings on how to plan, deliver and perform vocational educational programs by use of video in a blended learning context. This course targets everyone that wants to specialize by focusing on blended leaning techniques in vocational education and training. Teachers that have given excellent courses for students on campus may experience to fail when they perform equivalent distance teaching through video communication. The most obvious reasons for this are 1) the teacher has to act and operate in more complex technical environments, 2) the teachers most be conscious about the advantages and limitations of this medium, and, finally, 3) there is a need to use special techniques to activate and engage remote users, especially those with little experience on video communication services. The goal of the course is to give the participants basic understandings on how to plan, deliver and perform vocational educational programs that explore video technologies.
   B) The second part of the course targets everyone that has got some experience with videoconferencing teaching and wants to optimize the experienced quality of the lecture, both from your own and the other participants' point of view. This includes everyone that has got some experience with videoconferencing teaching and wants to optimize the experienced quality of the lecture, both from your own point of view and the other participant's point of view.

The training consists of a combination of theoretical and practical tasks in class (2-3 days), and that it may be followed up by mentoring and guidance of the instructors/teacher by utilizing videoconferencing (2-5 events).

In the first phase, of the instructor training program, two training sessions have been organized. Instructors delivered the courses by videoconferencing from Norway and the participants in the training sessions were teachers from "Petru Maior" University at Târgu-Mureş in Romania.

The content of the first training session, entitled "Use of smart board in education", was on subject related to: course curriculum, how does the smart board work, writing text, typing text, navigation between documents, extending pages, the page sorter, drawing geometric shapes, importing graphics, exporting documents, exporting lectures notes, the gallery. At this training session have been participated 38 teachers.

The second training session, entitled "Use of video conferencing in education", with 36 participants had subject related to: target groups, goals, contents, basic use of remote controls, connections, echo problems, multipart conference, ordinary peripherals, videoconferencing, reasons to use videoconferencing, common areas of use, videoconferencing equipment, additional peripherals, multipoint control unit, multipart conference, bandwidth, fixed and dynamical bandwidth.

The selection of participants has been done using a questionnaire about interest of participants in using smart board and videoconferencing.

Videos of the two training sessions are available on the project website [1].

4. Participants evaluation

Participants' evaluation of the course "Use of smart board in education" has been done with questionnaires composed of 15 questions deduced from the slides/course material. The reply to the questions is with true, false and no answer, final results being presented in the table 1.

Table 1

Questionnaires for participants' evaluation at the course "Use of smart board in education"

Question No.	Question	True	False	No ans
1	The Smartboard needs a PC and a projector to operate	38	0	0
2	The Smartboard is calibrated by adjusting the projector	34	4	0
3	The Smartboard has to be calibrated often (e.g. before every class)	31	7	0
4	The Smartboard has a built-in keyboard	34	4	0
5	Objects on the Smartboard are rotated by pulling a green dot on the object	38	0	0
6	A composite object has to be grouped together before scaling is possible	37	1	
7	It's better to extend the current page, rather than to insert a new page	30	8	0
8	The page sorter tab is used to insert images into documents	1	37	0
9	The screen capture tool is used for capturing both still images and animated images (video)	35	3	0
10	The Smartboard needs to have the Smart Notebook software running in order to operate	38	0	0
11	You can navigate PowerPoint shows by touching the Smartboard	38	0	0
12	The native file format of the Smartboard is PowerPoint (.ppt)	2	36	0
13	The Gallery shows thumbnails of all your Smartboard pages	24	12	2
14	You can add your own material to the Gallery	36	2	0
15	The Smartboard Recorder records in QuickTime format	34	3	1

For the course "Use of videoconferencing in Education" the participant evaluation has been done with 20 questions also deduced from the slides/course material. Final results are presented in the table 2.

Table 2

Questionnaires for participants' evaluation at the course "Use of smart video conferencing in education"

Question No.	Question	True	False	No ans
1	The term codec is used to describe the video conferencing system itself (the "box" which handles incoming and outgoing signals)	34	1	1
2	Bandwidth is a measure of the amount of information being transmitted	35	1	0
3	Most video conferences use a bandwidth of 50-100 Mbit/s	2	34	2
4	The term Quality of Service (QoS) refers to reservation of bandwidth for video conferencing	36	0	0
5	Video conferences are not affected by firewall issues because all firewalls automatically allow video traffic	33	2	1
6	An MCU is a device used to record video conferences	2	34	1
7	External MCUs are relatively inexpensive	0	36	0
8	Continuous Presence is a screen layout in which all participants are visible simultaneously	35	0	1
9	Echoes are caused by the remote site's microphone picking up your audio and transmitting it back to you as an echo	33	2	1
10	If you get an echo during a conference, there's most likely a problem at your end	4	31	1
11	Echo issues only occur multipoint conferences	4	32	0
12	If the remote site complains about an echo when they speak, the first step to eliminate the echo is for you to turn down the volume of your speakers	34	2	0
13	Single-coloured clothing which contrasts well with the background work well for video conferences	35	1	0
14	Patterned clothes work well because they make you stand out from the background	1	31	3
15	For a video lecture, multiple presets should be pre-programmed	31	3	2
16	When filming a person in front of an interactive whiteboard, the board should fill a large part of the view	32	4	0
17	External lights (e.g. spot lights) should be used when filming a person in front of an interactive whiteboard	34	2	0

18	Maintaining eye contact with the remote site is only important during the first 2-3 minutes of a video lecture	2	32	2
19	It's not possible to use interactive whiteboards in video conferences	2	34	0
20	It's sufficient to test the video connection a few minutes before the video conference/lecture starts	3	30	3

As conclusion, we appreciate that after testing of participants all have passed in good conditions the two training sessions.

5. Course and instructor evaluation

Course and instructor evaluation have been done using a system of questions related to the previous experiences with the subject of the course, personal benefit of the course, courseware, instructor, relevance of the course in future and further comments.

For the course "Use of smart board in education" the course and instructor evaluation final results are presented in the table 3.

Table 3

Questionnaires for course and instructors evaluation at the course "Use of smart board in education"

a. Previous experience with Smart board in training

	YES - often	YES - to some extent	NO
Have you used a Smart board before?	1	3	34
Have you given lectures by use of Smart board before?	1	3	34
Do you have access to a Smartboard?	1	2	35

b. Personal benefit of the course

	Very good		OK		Very poor
My personal benefit of the course has been	32		6		
How easy was the course to understand?	36		2		
How suitable was the content for your requirements?	6	4	24	4	
Overall rating of this course?	37	1			

c. Courseware

	Very good		OK		Very poor
Clarity of the handouts (how easy were they to understand)?	31	3	4		
How well did the course material follow the course?	38				
Overall rating of the course material?	35	1	2		

d. Instructor

	Very good		OK		Very poor
The pedagogical efforts of the instructor have been	36		2		
Ability to respond appropriately to questions	36		2		
How well prepared was the instructor?	36	1	1		
Knowledge of the subject matter	38				
Presentation abilities	37		1		

e. Relevance of the course for use of Smart board in the future

	Totally agree	Agree	Neutral	Disa gree	Totally disagree
The course has been very relevant for my own future use of Smart board (i.e. I'm more likely to use a Smart board in the future after completing this course)	33	4	1		
The course has made me curious about use of Smart board in training/courses	31	5	2		
Smart board seems like a useful tool for training/courses	33	3	2		
If I have access to equipment, I would like to use Smart board for my own courses	34	3	1		
Internal courses and technical assistance would make it easier for me to start using Smart board	34	1	3		

f. Further comments

One question has been addressed, regarding the possibility to integrate smart board with smart pen.

As conclusions of the training session we appreciate that most of the teachers selected to participate at the training session had low previous experience with smart board in training. Most of them have a very good personal benefit of the course, the courseware and the instructor were very good and they totally agree the relevance of the course for use of smart board in the future.

For the course "Use of videoconferencing in education" the course and instructor evaluation final results are presented in the table 4.

Table 4

Questionnaires for course and instructors evaluation at the course "Use of video conferencing in ed"

a. Previous experience with video in training

	YES - often	YES - to some extent	NO
Have you used videoconferencing equipment before?	1	5	30
Have you given lectures by videoconference before?		2	34
Do you have access to videoconferencing equipment?		2	34

b. Personal benefit of the course

	Very good		OK		Very poor
My personal benefit of the course has been	32		3		1
How easy was the course to understand?	34		2		
How suitable was the content for your requirements?	31		4		1
Overall rating of this course?	34		2		

c. Courseware

	Very good		OK		Very poor
Clarity of the handouts (how easy were they to understand)?	31		4		1
How well did the course material follow the course?	32		4		
Overall rating of the course material?	32		4		

d. Instructor

	Very good		OK		Very poor
The pedagogical efforts of the instructor have been	33		3		
Ability to respond appropriately to questions	34		2		
How well prepared was the instructor?	35		1		
Knowledge of the subject matter	36				
Presentation abilities	36				

e. Relevance of the course for use of video conferencing in the future

	Totally agree	Agree	Neu-tral	Disa gree	Totally disagree
The course has been very relevant for my own future use of video conferencing (i.e. I'm more likely to do videoconferences in the future after completing this course)	32	1	2	1	
The course has made me curious about use of videoconferences for training/courses	32	1	2	1	
Videoconferencing seems like a useful tool for training/courses	34		2		
If I have access to equipment, I would like to use videoconferencing for my own courses	32	2	1	1	
Internal courses and technical assistance would make it easier for me to start using videoconferences	32	2	1	1	

f. Further comments One question has been addressed about how is possible to integrate Smart Pen with Smart Board in videoconference room.

As conclusion of the training session we appreciate that most of the teachers selected to participate at the training session did not use video equipment before the training session. The personal benefit after participating at the course was very good, also the courseware and the instructor were very good and they totally agree the relevance of the course for use of video conferencing in the future.

6. Results and discussion

The teaching infrastructure is renovated in Central and Western part of Romania in order to improve and enhance working conditions for providers of vocational education. It improves vocational training quality by making it more flexible and adaptable to the Romanian labour market. The validation of the infrastructure will be done by delivering a number of vocational educations and training courses. The presentation will demonstrate the first results obtained from the ongoing R&D work for the development of a regional network of vocational education and training centres in Central and Western Romania. The network will utilize high definition video solutions and the new SRS technologies, to improve the inter-institutional partnership between existing

vocational training centres and a regional university in the central part of Romania. Transfer of best practices and knowledge from state of the art use of video in education in Norway is addressed. Participating training organizations and industrial companies may use the new training environment to offer and receive a broad range of specialized courses, including transnational exchange of competence transfer.

Also an important step in implementing Move-IT project is training of instructors.

Multilingual instructor training courses help simplifying introduction to training delivery that utilize video communication, b) pedagogical methods and use of video in vocational education and training [3,4], c) blended learning methods that optimize use of video [5]. The later includes basic understandings on how to plan, deliver and perform vocational educational programs by use of video in a blended learning context, as well as optimizing the experienced quality of the lectures from the instructor and students point of view. The training will consist of a combination of theoretical and practical tasks in class, and with mentoring and guidance of the instructors/teacher that may follow it up by utilizing videoconferencing.

7. Conclusions

"Petru Maior" University of Târgu Mureş is coordinator of the project „Innovative Tools and Models for Vocational Education and Training in Central and Western Romania" (acronym MoVE-IT), financed by EEA mechanism, having partner Sør-Trøndelag University College of Trondheim in Norway. During the project we have developed and deployed instructor training through a dedicated instructor training program.

Two training sessions have been organized by videoconferencing from Norway, for the teachers from "Petru Maior" University at Târgu-Mureş in Romania. The courses are entitled "Use of smart board in education" and "Use of video conferencing in education".

The results for participants' evaluation, course and instructor evaluation after the two instructor training sessions organised for teachers from "Petru Maior" University of Târgu-Mureş are presented in this article. As conclusion, we appreciate that after testing of participants all have passed in good conditions the two training sessions. Most of the teachers selected to participate at the training session did not use smart board or video equipment before the training session. The personal benefit after participating at the course was very good, also the courseware and the instructor were very good and they totally agree the relevance of the course for use of smart board and video conferencing in the future

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