Conference title

Considerations Related to the Videoconference with European Science Teachers Organized in the Frame of VccSSe Project

Gabriel Gorghiu a *, Laura Monica Gorghiu b, Ana Maria Suduc a and Mihai Bîzoia a

a Electrical Engineering Faculty, Valahia University Targoviste, 18-24 Unirii Blvd., 130082 Targoviste, Romania
b Faculty of Sciences and Arts, Valahia University Targoviste, 18-24 Unirii Blvd., 130082 Targoviste, Romania

Abstract

Nowadays, the videoconference represents a spread technology in the distant training processes but experienced also in the traditional ones, mostly in the frame of national and international projects. Taking into consideration the last type of actions, the paper emphasizes on the main aspects carried out for organizing a Meeting with European Science teachers, under the umbrella of a videoconference, as a distinct dissemination activity, planned in the frame of the three years Socrates-Comenius 2.1 European project “VccSSe - Virtual Community Collaborating Space for Science Education” - code 128989-CP-1-2006-1-RO-COMENIUS-C21. The project partnership consists of 9 institutions, coordinated by Valahia University Targoviste, Romania. The paper offers an image on the videoconference organization and feedback collected from the participants. There were taken into consideration and discussed aspects like: technical and organizational criteria, content of the videoconference, communication and feedback criteria, strong and weak points met during the videoconference session. © 2010 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of the Guest Editor.

Keywords: on-line meeting; videoconference; Adobe Acrobat Connect Pro; Science education; dissemination activity; Comenius 2.1. Project

1. Introduction

Generally known as a two-way synchronous communication of sound and vision, the videoconferencing technology represents a powerful instrument for gathering people who are located in different geographical places and it makes possible their communication in real time, including audio and visual connection. Beyond the natural advantages of distant communication, the videoconferencing technology opened important opportunities for the educational institutions, especially for distance learning and international meetings organized in the frame of various transnational projects [1]. The videoconference represents also one of the main channels for carrying out a part of projects’ tasks or disseminating the results, having as main benefits the elimination of physical distance limitations, the massive reduction of expenses for organizing the meetings or training sessions, the possibility of making direct interaction with the presenters or moderators, in this case, related questions or answers to a specific subject being offered immediately [2].

* Gabriel Gorghiu. Tel.: +40-245-217683; fax: +40-245-217683.
E-mail address: ggorghiu@yahoo.com.

1877-0509 © 2010 Published by Elsevier Ltd.
Videoconferencing provides visual communication in real time for trainers and learners, having the advantage of replacing real visits and exchanges. Trying to enlarge the experiences gained in various transnational projects, many videoconferences became successful when they are used as dissemination channel. This is also the case of the Meeting with European Science teachers, which embraced the form of a videoconference, established as a distinct dissemination activity, planned in the frame of the three years Socrates-Comenius 2.1 European project “VccSSe - Virtual Community Collaborating Space for Science Education” (http://www.vccsse.ssai.valahia.ro).

The VccSSe Project had as declared objective to adapt, develop, test, implement and disseminate training modules, teaching methodologies and pedagogical strategies based on the use of Virtual Instruments, with the view to their implementation in the classroom, through ICT tools but the main goals of the project have been achieved taking into account the specific particularities of different countries involved in the project partnership that consisted on 9 institutions coming from 5 different European countries: Valahia University Targoviste (Romania) - the coordinating institution, Centro de Formación del Profesorado e Innovación Educativa Valladolid II (Spain), Centro del Profesorado y de Recursos de Gijon (Spain), Centro de Profesores y Recursos de Zaragoza I (Spain), Politechnika Warszawska (Poland), Regionalny Ośrodek Doskonalenia Nauczycieli "WOM" w Bielsku-Białej (Poland), Joensuun Yliopisto (Finland), Babes Bolyai University Cluj Napoca (Romania) and University of Patras (Greece) [3].

2. Method

Organized in the mid period of the project final year, the one hour videoconference represented one of the most important project dissemination activities that involved 100 participants and had as main objective to spread a part of the project results, emphasizing on the presentation of the project’s main objectives and its development, demonstration and illustration of a series of virtual experiments and on-line simulating laboratories designed for Science education (prepared by the teachers who attended the Virtual Instrumentation in Science Education Training Modules, organized in the frame of the project), presentation of the Guideline for Best Practices in Educational Use of Virtual Instrumentation (created as a special output of the project). The Meeting was the best moment for introducing to the audience the VccSSe Exhibition composed by 50 representative video-experiments related to the implementation of virtual experiments in Sciences Education. The Exhibition represents a web interface which contains the best virtual experiments produced by the in-service teachers who finalized the training modules [4]. There were also scheduled moments dedicated for discussions and comments, made by the participants. Figure 1 illustrates the videoconference agenda, as this was agreed by the project partnership.

![Figure 1. The agenda of the videoconference organized in the frame of the European Socrates Comenius 2.1 VccSSe project)](attachment:image.png)
The videoconference agenda was published on the project webpage and invitations to possible interested Science teachers were sent, together with a *poster*, special designed for this event (fig. 2a) and specific *golden rules* (a part of this document is presented in fig. 2b).

![VCCSe - Virtual Community Collaborating Space for Science Education](image)

**Fig. 2.** The videoconference poster (a) and specific golden rules (b)

The software selected by the project partnership for carrying out the Meeting was *Adobe Acrobat Connect Pro*. Beside some important advantages (high productivity and reduce costs in wide collaboration, security and compliance, customization and extension of the user interface, scalability, performance, good audio capabilities within the on-line meetings [5]), the solution was chosen mainly due to the fact that one partner had full access to the videoconference management program and gathered an important experience in its using.

The list of participants includes 100 persons (project team members, tutors, teachers, European Science teachers, educational decision makers). The invited persons are coming from 15 European countries: Romania, Spain, Poland, Finland, Greece, Portugal, UK, Ireland, Belgium, Germany, Austria, Norway, Slovakia, Bulgaria and Turkey. The distribution of the participants (as this was registered per project partner country and institution) is presented in Table 1.

<table>
<thead>
<tr>
<th>Partner country</th>
<th>Partner city</th>
<th>Invited participants / city</th>
<th>Invited participants / country</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romania</td>
<td>Targoviste</td>
<td>24</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Cluj Napoca</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>Valladolid</td>
<td>13</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Gijon</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zaragoza</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>Warsaw</td>
<td>3</td>
<td>16</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Bielsko-Biala</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>Joensuu</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>Patras</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
Generally, the participants were grouped in several on-line meeting points, the main ones (9) being organized at project partner institutions (see the column Partner city). Other meeting points (opened by the invited external guests) were opened in: Porto (Portugal), Collingham - Wetherby (UK), Dublin (Ireland), Geel (Belgium), Berlin (Germany), Vienna (Austria), Dokka (Norway), Trécin (Slovakia), Sofia (Bulgaria) and Istanbul (Turkey). Unfortunately, not all of them have been kept open during the whole period of the conference or have been actively involved in the meeting. However, it must be said that some invited external guests had minimum experience in using a web conferencing system.

A feedback provided by all the participants was registered on-line and in printed form at the end of the Meeting, in order to evaluate the videoconference. The form included four categories of questions which allowed the videoconference evaluation having in view criteria like: technical, organizational, content, communication and summing-up. The results were evaluated per project partnership institution (and related invited guests), per country and per total number of participants [6].

3. Results and Discussions

3.1. Technical criteria

From the technical point of view, the videoconference was appreciated by the participants at a high rate (mainly: excellent and very good) - with some exceptions considering the sound quality criteria -, as following:

- the difficulty level on preparing the equipment for the conference and operating the videoconference software - 85% of participants appreciated as excellent and very good;
- the time needed to connect the participants - 82% of participants appreciated as excellent and very good;
- the vision quality - 90% of participants considered as excellent and very good;
- the sound quality - 62% of participants considered as excellent and very good;
- the connection stability - 82% of participants appreciated as excellent and very good.

3.2. Organizational criteria

From the organizational point of view, the videoconference was evaluated by the participants with very favourable items (mainly: excellent and very good), as following:

- the agenda and duration of the videoconference - 85% of participants appreciated as excellent and very good;
- the coordinating skills - 88% of participants considered as excellent and very good;
- the coherence of the partners’ performance content with the agenda/aims - 86% of participants appreciated as excellent and very good;
- the effectiveness of the time usage in the participants group - 79% of participants considered as excellent and very good;
- the clarity of the videoconference goals before the realization - 87% of participants appreciated as excellent and very good;
- the extent to which the conference guests’ expectations were met - 85% of participants considered as excellent and very good;
- the extent to which the project partners’ expectations were met - 88% of participants appreciated as excellent and very good.

3.3. Videoconference content

The videoconference content was appreciated mainly as excellent and very good. The criteria used for this evaluation were:

- the density of information regarding the delivery of the training activities developed during the project life, products, impact in the classroom and teachers’ feedback - an average of 85% of the participants considered as excellent and very good;
- the diversity of the products presented with regard to the age of the pupils / students, the school subject and the kind of software - an average of 89% of the participants appreciated as excellent and very good.
3.4. Communication and feedback criteria. Videoconference versus traditional conference

The communicative performance of the videoconference participants and the quality of the feedback (offered by the participants regarding the use of the virtual instrumentation in education) received also excellent and very good appreciation. The participants really enjoyed the web conferencing experience. To the question: “What did / did not you like using the videoconference technology?”, the participants gave answers which show that, in general, they are aware of the videoconference benefits against the traditional one: “using the technology every participant saves a lot of time”, “the videoconference could be a very good option for a meeting around Europe which can cut a lot of costs involved in a real conference”, “very easy to use and high effects in practice” etc.

4. Conclusions

The videoconference is proved to be a good solution for knowledge transfer mainly when an interaction between participants is necessary, especially where the locations are geographically spread. One of the most important benefits is related to costs and time saving.

The videoconferences held in the frame of transnational projects are generally successful due to their intense and attentive organizations. The feedback is a good one and the participants expressed a favorable appreciation on those actions, even they embrace the form of training or dissemination actions. However, the presented results show in a clear way that the participants to a knowledge dissemination videoconference can be more than satisfied when joining the meeting if the action is properly organized, coordinated and very well supported by the existed hardware / software environment [7].

Acknowledgements

This work was funded through the Socrates-Comenius 2.1 European project 128989-CP-1-2006-1-RO-COMENIUS-C21: “VccSSe - Virtual Community Collaborating Space for Science Education”. The support offered by the European Commission, Education and Training, School Education: Socrates: Comenius and the Education, Audiovisual and Culture Executive Agency as responsible for the management of EU’s programmes in the fields of education, culture and audiovisual, through the project mentioned above, is gratefully acknowledged.

References