

APONTE

EXECUTIVE SUMMARY

Timing of case

The time allocated for the experience was limited to about 4 months. To fully determine and measure all the benefits and disadvantages of introducing ICT in teaching a project, the timing should be several months or years longer.

Geographic setting (case location or geographic spread)

The project was carried out in Galicia (North West Spain) and Northern Portugal, two regions which are presenting a wide range of similarities in terms of geography, language, economics, population, etc.

Type and use of ICT

- A PONTE website
- Aula A PONTE (AAP), a web-based collaboration tool. It grouped several features, such as web mail, chat tool, discussion forums, course section, etc.
- The Internet Starter Kit (ISK) was a self-training CD-Rom for teachers including basic information and a practical guide for Internet beginners.
- Videoconferencing
- Additional printed and multimedia training material

Main contributors

Sema Spain: overall project co-ordination and the integration of the distance learning tool Aula A PONTE.

Super-computation Centre of Galicia (CESGA): co-ordination the 'pedagogical experiences' in Galicia and between Galicia and Portugal.

Association of Universities of Northern Portugal (AURN): co-ordination of the 'pedagogical experiences' at the Portuguese participating schools.

SBLN (UK): co-ordination of the adaptation and translation of the Internet Starter Kit into Galician and Portuguese for the use of the A PONTE teachers.

Main beneficiaries

Students and teachers in Galicia (Spain): 16 schools. Northern Portugal: 11 schools.

Background

A PONTE was focused on introducing ICT (new technologies) in rural areas. The overall approach was to analyse the advantages of using it in secondary schools. Rural areas have some demographic, economic and socio-cultural particularities. These zones are usually isolated, have a low teacher-pupil rate, and it is difficult to access cultural resources and events from them.

Objectives

The objective was to analyse the use of ICT in education in rural areas based on pedagogical experiences carried out in Galicia (Spain) and Northern Portugal. The methodology included a research on educational needs, a selection of schools to perform the experience, creation of ICT tools for the experience, design of the pedagogical experience, fostering of multicultural diversity, carrying out the experience,

dissemination of results.

Activities:

- 1- Research on educational needs in rural areas and selection of schools to perform the experience.
2. Technical approach: ICT tools chosen for the experience
3. The design of the pedagogical experience

Outputs/results

Pupils in general enjoyed the experience and took advantage of their pedagogical aims. Communication in schools was positively affected by the use of ICT. The awareness of other linguistic and cultural realities was noticeable. However, one of the objectives - fostering group work through ICT- was not completely achieved.

Teachers considered that computers are not the master key for learning; a teacher is always needed to humanise the process. Some of them were even reluctant to use computers in class. But throughout the experience they appreciated interesting possibilities and possible applications. They developed two different pedagogical approaches by using ICT and tested their results in situ.

After the trial, a compilation of guidelines for future similar projects was made: ICT training should be integrated in future teachers' curriculum; technical support will be needed; guide to the Internet resources for teachers to reuse already-made contents; fostering campaigns for reluctant teachers; class schedules must be adjusted in order to ease synchronic activities among the schools, and the need to approach the Educational administration down to the schools or viceversa depending on the structure and uses of the community.

Lessons and conclusions

The main result of the project is as a set of general guidelines for the application of ICT rural areas in other countries of the European Union. It could be easy to adapt and use some lessons learnt during the project to most rural regions. Some ideas achieved during the project development should be adapted to new appearing technologies. As an example, videoconferencing over ISDN was found to be very promising. However, it might have to wait some more years before this technology is cheap enough and the networks support better this kind of transmissions, but ICT should fit expectations of educational rural communities.

DESCRIPTION – BEST PRACTICE

The case shows the following best practice:

Background

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Objectives

The A PONTE goals were to establish closer relations between universities and schools, to meet demand for less taught subjects, and to bridge multicultural and multilingual diversity in these rural areas.

The objective was to analyse the use of ICT in education in rural areas based on pedagogical experiences carried out in Galicia (Spain) and Northern Portugal. The methodology included a research on educational needs, a selection of schools to perform the experience, creation of ICT tools for the experience, design of the pedagogical experience, fostering of multicultural diversity, carrying out the experience, dissemination of results.

The A PONTE project has evaluated the advantages and disadvantages of using ICT in educational systems particularly in remote areas. The specific goals of A PONTE were:

- To establish closer relations between universities and schools in rural areas.
- To meet demand for less taught subjects.
- To bridge multicultural and multilingual diversity.

Activities

1- Research on educational needs in rural areas and selection of schools to perform the experience.

First of all, the A PONTE team performed an analysis of the specific requirements of the educational community in rural areas and the establishment of criteria for school selection. The result from this research had to show how ICT can help to improve the educational quality in rural areas. It also had to evaluate the conditions required for the performance of the experiences. The need analysis would take into account:

- curriculum subjects (compulsory-optional, national-regional scope)
- location (rural-urban)
- ownership (public-private)
- educational levels (elementary-primary-secondary-professional training).

The need analysis did end with a selection of the schools who would participate in the pedagogical experience, eleven schools in Portugal, and sixteen in Galicia.

2. Technical approach: ICT tools chosen for the experience

The next step in the methodology was to provide the schools with the necessary ICT tools to perform the experience. To reach the pedagogical goals of the project program, it seemed very important to provide non-expert users with easy tools and user-friendly online work environments. Feedback from teachers was required to create the appropriate applications, and therefore, during the regular workshops organised with all stakeholders the tools were evaluated by the teachers, and subsequently refined by the consortium. Several tools were developed to achieve the project goals:

- The Internet Starter Kit (ISK) is a self-training CD for teachers, which was designed for learning fundamental skills on the Internet. It was translated to Galician and Portuguese.
- Aula A PONTE (AAP) is a browser-based collaboration tool. It was developed to support course activities and course delivery over the web. Existing tools for collaboration and distance learning were integrated in the Aula A PONTE. The final system consisted of a chat tool, an email client, a log analysis tool, discussion forums,

announce board, a collaborative story creation module) and 'Aulas', content repositories where the content of teaching courses could be accessed.

Apart from these technical tools, a helpdesk was set up which would solve all doubts of teachers and pupils concerning the practical and pedagogical use of Information and Communication Technologies, pedagogical experiments performed, the material offered or the A PONTE project in general via an on-line service.

3. The design of the pedagogical experience

A schedule was elaborated for the teachers of the 16 schools in Galicia and 11 in Portugal to meet periodically and form a committee in order to review the progress of A PONTE and plan next activities. In these meetings, workshops and conferences some topics discussed were:

- Content of the teaching units
- Definition of the pedagogical experience
- Status and progress of the Internet Starter Kit for teachers
- Integration of Aula A PONTE into the experience.

It was decided to:

- To study the distance co-operation goal, an experience was set up to define a teaching unit with groups collaborating at a distance. 'European Dimension' was chosen as content of the teaching unit, because this could be educationally relevant within the framework of the experience.
- To evaluate the usefulness of the Internet in everyday teaching, several pedagogical experiences were carried out in the regular school activity context. The teacher would select a working topic out of the regular curriculum, and would define the contents of a class to teach the selected topic.
- In order to connect secondary students to university reality the students could access the A PONTE Website, where there was a specific section devoted to the university close to the schools, with information databases and links available. Also several videoconferences with staff from the University of Santiago de Compostela's guidance centre were organised, allowing the students to make specific questions on the issues that concerned them.

4. The actual pedagogical experience & evaluation

During 4 months the actual pedagogical experience took place. Just before it took place, teachers were trained and the necessary equipment was installed.

The pedagogical team following the activities in Galicia was formed by a group of 3 professors and 3 researchers from the University of Santiago de Compostela, (Faculty of Educational Sciences and Educational Sciences Institute).

Their role in the experience was different within each stage:

- Within the initial stage of the experience, the pedagogical team worked on the elaboration and distribution of the "teacher questionnaire" and "student questionnaire", going to every participating school to interview both actors.
- Monthly, there was a visit to every school by a member of the pedagogical team in order to monitor the work process developed by the students and teachers when working on the didactic unit designed. A "Observation Protocol" was completed after each visit.
- The last stage comprised the assistance to the different pedagogical questions arising from the teachers of the Project. The team provided this pedagogical support via e-mail, ordinary mail, phone and fax. This task also allowed to check the development of

the activities at the schools. All this information was collected by the researchers in individual field books.

5. Dissemination

A PONTE is a demonstration project. It is obvious that the project has developed a strong communication plan, focussing on several means of communication and various target groups.

The general objectives of the communication plan were:

- to inform the identified target audience in Galicia and Northern Portugal, but also in the other countries and regions of Europe, about the A PONTE project and its outcomes.
- to enhance the professional development of teachers, in particular concerning the use of ICT in teaching and learning.

The communication was carried out through three conferences, the website, and the CONTEXT magazine.

Output and Results

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Final guidelines for projects with the scope of introducing ICT in rural schools
As a conclusion, we present here a compilation of guidelines for similar projects:

1. The competent administration should commit an education technology funding strategy based on integrating ICT into the curriculum. This necessarily requires ongoing investment in:

-support for teachers (i.e., technical and integration support, models of practice, and training)

-infrastructure, networking, hardware and software in classrooms/schools.

-additional ICT funding for a multi-year, phased-in, rural specific approach.

2. Technical Support. Make sure that there is a system manager available to solve problems, so that teachers do not have to do this type of work in their free time. Buy good software, which has the required functionality for the school to act as the virtual aula. Schools should rely on a well-developed product of their choice, which is constantly maintained, and for which they can get a good support.

3. Give the teachers basic training to be able to use Internet resources for their teaching and personal uses. On-line training and CD-Rom based training are not enough, and must be complemented with face-to-face learning. Make the training partly general for all teachers (general Internet skills) and partly subject specific, with easy examples of use in the classroom.

4. Provide teachers with tools and guides to develop, complement or adapt already-made material for their classes. ICT provides highly valuable resources for teachers and students who are located in isolated areas, which can help diminish the gap with urban areas availability of resources, such as on-line libraries, access to University information or other private and public services.

5. Foster reluctant teachers' participation. If these projects are intended to have sensible mid or long term effects in rural education, they require participation by teachers who may not be enthusiasts or even believe that technology will not answer any of the important questions about education. Any successful implementation will require that their questions are included in the implementation strategies and decisions.

6. The project experiences should plan very detailed short term tasks and activities, integrated in a more ambitious framework. Train them to start with simple scenarios, relating them as much as possible with links to their already known skills. Only when the teachers and students feel confident with this, evolve to scenarios where the possibilities of internet are used in a better way: collaboration at a distance, etc.

Summarising, ICT in rural areas might be useful, however it will be very expensive when you follow all necessary steps. On the other hand, it might be an important element in keeping schools open and help people living in the small villages while offering them the access to the same resources available in the cities.

References and links

FINAL REPORT - ESPRIT Project N^o: 28085, A PONTE

"Secondary Education in Rural Areas supported by ICT" by Elena COELLO, Lydia MONTANDON, José M. CAVANILLAS . The paper describes the first project results which are the analysis on specific needs.

Further information

- Secondary Education in Rural Areas supported by ICT. The paper describes the first project results which are the analysis on specific needs.
- A PONTE - Final report ESPRIT project 28085