

## PROWEB, AN EXPERIENCE IN TEACHERS CONTINUING TRAINING

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**Abstract:** *The paper aims to make an analysis and an evaluation on the degree of pedagogical utility which had the programme The Web of Teachers Continuing Training for Using Multimedia, Virtual Tools and Web 2.0 in Mathematics and Sciences Curriculum (ProWeb), POSDRU 1.3/157/S/141587. The beneficiary of this project is „Valahia” University in Targoviste and the partners are: „Lucian Blaga” University in Sibiu, „Constantin Btancusi” University in Targu Jiu, „Stefan cel Mare” university in Suceava and „Tomis” University in Constanta. The aim of the research is to identify issues related to the design and content of the study program, what could be improved in order to resume and extend this type of course. We do not exclude the idea to expand it and at the university level. We used as investigation tools both methods used for quantity research: questionnaires addressed to all those 220 trainees, teaching staff, primary school teachers and teachers who teach subjects like Mathematics and Sciences, to trainers and experts involved in the training activities, but also methods and instruments used for the qualitative research: sheets for evaluating the course activities, trainees discussions and direct observation. The paper represents the results obtained in Sibiu, Alba, Hunedoara, Harghita and Brasov, counties where the training activity was implemented by „Lucian Blaga” University in Sibiu.*

**Keywords:** *TIC competences, teaching-learning-evaluation, improving, motivation*

### 1. Training programme description

One of the students identified needs is the increase of the motivation for the school activities.

A way through which we can respond to this need is integrating in the school activities the facilities which multimedia, Web 2 and hypermedia can offer for the activities of teaching-learning-evaluation.

The new technology can create in the students' classes' experience that that are part of younger generation's life; information and communication technology is part of our children and young people's life. The school has no right to deprive them of this normality. It's worth making an effort to bring the normality in their classrooms with a well-defined educational purpose.

The new technology facilitates the understanding of physical, chemical and biological phenomena providing a visible learning, the student feeling his effort rewarded by participating in class and thus motivated to participate.

The technology offers a support for an interdisciplinary approach to school learning, which is closer to learning for life.

Technology enhances motivation, through the satisfaction given by the success felt by each student.

The Project *The Web of Teachers Continuing Training for Using Multimedia, Virtual Instrumentation and Web 2.0 in Mathematics and Sciences Curriculum (ProWeb)*, POSDRU 1.3/157/S/141587 aims to contribute to improving the training of the target group through quality and innovative aspect of training provided through the disciplines included in the program by involving the teachers in the target group in activities of piloting the products made as a result of training, exchanges of best practices through organised workshops, by strengthening the institutional capacity of the 5 partners- providers of continuous training.

As a whole the project aims: the development, accreditation and delivery of two programs of continuous training of teachers in secondary education, to develop the skills to use ICT in teaching, improving the level of professional training in information technologies and communications for a substantial number of teaching staff.

#### Project objectives:

- improving lifelong learning for secondary and high school teachers in mathematics and natural sciences curriculum (physics, chemistry, biology);
- improving the opportunities for career evolution and getting to a higher level of teachers' professional development by developing and providing training programs aiming the introducing ICT skills in teaching.

The project a part of its training face-to-face, courses and practical applications and another part of the training was, two modules, four disciplines:

- Fundamentals of pedagogical use of ICT in the curriculum area of Mathematics and Natural Sciences;
- Technologies and multimedia / hypermedia uses for modern education;

- Web 2.0 educational applications for the curriculum in Mathematics and Natural Sciences;
- Virtual Instrumentation and educational software.

The online activity continued the direct training and allowed remotely, a rich sharing exchange of views, experiences and best practices, resulting from the application of innovative proposed strategies in class. The activity of each group is performed under the guidance and counseling of the assistant trainer who conducted the direct work using practical examples.

The project activity has already taken several steps:

- Direct training of teachers through 13 hours of course for each subject, in groups of 40-50 students;
- Direct training of teachers through 14 hours of practical applications for each subject in each group of 20 to 25 trainees;
- Online training, 13 hours for each discipline;
- Subjects assessment, 3 hours, online activity.

The courses are on the platform , plus supporting materials offered by the trainer. They are designed and structured in such manner that even a novice computer user can access the information.

The special value of this tool lies in its ability to enable each user, whenever he wants and from any place of his existence, to enjoy the experience shared by hundreds of colleagues, on a common problem: the use of ICT in teaching and learning -evaluation of subjects in mathematics and sciences curriculum. You need only a computer, an Internet connection and... desire.

The project excels with a high degree of innovation with broad application. The innovation in the project is on one hand related to the type of the continuous training proposed (the contents of the two training programs were accredited and provided) and on the other hand it is related to the instruments and teaching methodology for their use in the training activities, piloting the products on the work in applied formation stage, but also as part of disseminating the benefits of the project, focusing on the real possibility of current implementing in class.

## **2. Research**

The aim of the research is analyzing and evaluating the degree of the pedagogical utility which the programme *The Web of Teachers Continuing Training for Using Multimedia, Virtual Tools and Web 2.0 in Mathematics and Sciences Curriculum (ProWeb)*, POSDRU 1.3/157/S/141587 had in

order to identify issues related to program design and the curriculum content, what could be improved in order to resume and extend this type of course.

### ***2.1. The research results***

The statistical interpretation of replies to questionnaires administered and the results of direct observation led to the following results:

- 100 out of the teachers surveyed said they would have appreciated the course, in a large and very large extent;
- Disciplines 2.1. and 2.2, achieved the highest score in the applicability – on the discipline. The latter was deemed useful by each teacher on his specialty;
- Discipline 1.2, obtained the lowest score in the applicability.

In the disciplines, the highest score, they obtained the following chapters:

- Discipline 1.1., Chapter Fundamentals of pedagogical use of ICT in education;
- Discipline 1.2., Multimedia Technologies in Education;
- Discipline 2.1., Typology of web 2.0 tools Blogs and microblogging (Twitter);
- Discipline 2.2. Each chapter was appreciated by teachers on specialties.

Within disciplines, the lowest score was obtained by the chapters:

- Discipline 1.1., ICT and education in the context of the knowledge society;
- Discipline 1.2., Multimedia and Internet in the educational process;
- Discipline 2.1., Typology of web 2.0 tools:
  - Media sharing (YouTube, Flickr, Slideshare);
  - Social networks (Facebook and LinkedIn);
  - Online web applications (Google Docs).

From the qualitative analysis upheld the following recommendations can be concluded:

- selection of trainees by level of competence skills of computer use;
- achieving the 2.2 discipline of groups of trainees on subjects taught: primary teachers group, the group of physics, chemistry, mathematics and biology teachers;
- decongestion of the content, taking into account the degree of applicability appreciated by the participating teachers;

- allotting a greater number of hours to direct practical activities;
- realization of courses for a whole year to have the time of application and sedimentation of what was learned.

### **3. Perspectives**

The research findings determine several perspectives:

- integration of content in the curriculum ICT of students future teachers, both by teacher training for primary and pre-school and also in the psycho-pedagogical module;
- realization of such a course, where the trainees are university professors;
- achieving a pedagogical development laboratory, where there are resources for initial and continuous training of teachers on ICT in the „L .Blaga" University in Sibiu, The Department of Teacher Training.

As for the competences and contents of the four disciplines we think it would be useful a professional development program, as an obligation for all the teachers who teach in teacher training departments.

The same skills and content would be beneficial to provide at least an optional subject if at present it cannot be compulsory for the study program completed in the initial training of future teachers.

A platform would be useful in preparing future teachers, facilitating the access for all to practical experiences during the teaching practice. The virtual community would be composed of teachers coordinating the practice, didactic staff, mentors and student practitioners in a permanent collaboration, with the opportunity to bring each contribution to the practical training of future teachers.

Certainly, the value of the continuous training at the level of teachers in secondary education cannot be disputed, it is absolutely necessary, but doubling it through such a platform, used in initial training would have multiple positive values.

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