Συνέδρια της Ελληνικής Επιστημονικής Ένωσης Τεχνολογιών Πληροφορίας & Επικοινωνιών στην Εκπαίδευση

Τόμ. 1 (2000)

2ο Συνέδριο ΕΤΠΕ «Οι ΤΠΕ στην Εκπαίδευση»

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Βιβλιογραφική αναφορά:

Aikonen, R. (2025). OrtoWeb: from contents as an IT based learning environment for Orthodox Religion Education . *Συνέδρια της Ελληνικής Επιστημονικής Ένωσης Τεχνολογιών Πληροφορίας & Επικοινωνιών στην Εκπαίδευση*, *1*, 435–441. ανακτήθηκε από https://eproceedings.epublishing.ekt.gr/index.php/cetpe/article/view/8280

OrtoWeb: from contents as an IT based learning environment for Orthodox Religion Education

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In Finland the Orthodox Church is a minority religion. The members of the Orthodox Church make up 1% of the total Finnish population of about 5.5 million. The Finnish-speaking Orthodox Church is autonomous and belongs to the Ecumenical Patriarchate of Constantinople. Religion teaching is taught in public schools. It is a compulsory subject for the pupils at both at Elementary and Secondary Schools (Lower and Upper). Every school year there are throughout the country about 6000 pupils who are members of the Christian Orthodox Church and they are taught by 300 teachers. Of those 4/5 are part-time teachers (Primary School Teachers) of the religion lessons. Almost every second teacher is working as a full-time primary school teacher (Aikonen 1997). The members of the Orthodox Church are spread out all over Finland because of the Second World War, when about 400 000 Finns had to leave their homes in the area called Carelia and were resettled throughout the country. Most of these people were Orthodox Christians. Today the parishes are rather small and most Orthodox Christians live in the eastern and southern parts of the country. In spite of the good educational infrastructure, every year there are pupils who cannot be reached by religion lessons.

Towards an Information Society

Since 1996 the Finnish Ministry of Education has put into practice a program called ”Finland as an Information Society ”. The main targets are to increase the benefits of the new information technology in communication and education, to adopt it in networking between different kinds of institutions, i.e. schools, and to raise the level of education and research by applying information technology. This program is organised by the Finnish National Board of Education, and the first part will end at the end of 1999. The evaluation of this development work shows that the benefit of the educational technology in universities and other educational establishments has varied considerably.

It is estimated that 1/5 of the teaching staff extensively apply the new technology to support teaching. Almost all pupils, students and teachers would be willing to use more new technology in their studies and teaching than they use now. The pedagogical use of information and communication technologies has been successful in pilot projects, although more emphasis should be placed on getting more pedagogical use from the new technology.

To achieve this kind of Information Society, the systematic development of learning environments based on research, for example, can be divided into six sub-themes:

1. Information society skills for all
2. Information society skills of educational staff
3. Knowledge of professionals in the information and content industries
4. Consolidation of virtual learning environments
5. Electronic publication, classification, and distribution of research information and teaching material
6. Strengthening the structures of the information society

The lack of suitable digital teaching material is a major obstacle to the wide use of information and communication technologies in education and teaching. That is why, for the moment, the program clearly emphasises two categories: developing teaching methods and environments for using the networks and developing materials for them. During the first five-year period the technology and computers themselves were playing the biggest role. Now there is a great challenge to get ideas about what to do with the computers; this is the main reason for the new national program. During the next five years special focus is also going to be aimed at educational staff and teacher education to improve their skills in adopting new technology as a learning and teaching environment.

Theoretical framework for the OrtoWeb

The main ideas of efforts like OrtoWeb are based on the theory of constructive learning and the constructive way to understand information. In the background there is also Kolb´s (1984) theory about experimental learning. The learner him/herself and his way to understand information are the starting points of the learning process. A learner seeks information and the learning situation is to reform and reproduce that information while the learner reflects on the learning process. The guidelines for that kind of learning are the stimulating contexts, because learning is not just moving readymade information from outside to inside. (Myller 1996, Rauste-von Wright, M. & von Wright, J. 1994, 121-127.)
The applications of educational technology are combined with the new open and flexible learning environments. The learning environment itself contains learners, educators, learning theories and methods, operation models, materials, techniques and media as a holistic acting environment for learning. (Auer & Pohjonen 1995, 14.). Distance- and multiform teaching are among the means to achieve openness and flexibility in learning. With the help of the new information technology, we can produce new ways of learning and new forms for learning.
Teaching in networks and networks in teaching are two different traditions. The goals, starting points, teaching plans and choice of technology for them are different. The role of teacher and learner are also different in these two ways of learning.
Networks in teaching are based on the idea that a teacher utilises the network services to diversify to multiform teaching. The nets are used as teaching aids. The network services used in teaching can deal with distributing information or communication. Network communication usually means sending e-mail messages with their attachments, voice mail, text-based discussion (ICR) or pictures in video or other formats. Because of the www, the Internet is the most popular of the available information services. Communication in this environment has many benefits. The information can easily be revised, stored and produced compared to the paper versions.
Teaching in networks can be planned so that new learning material can be produced from the information located in the nets. Students can obtain information independently or they can produce information for the net (i.e. own www-pages). When using the nets in this way a teacher always has to remember that the computer-based learning environment itself is not the absolute value. One also has to take into account the functional insecurity when using nets in teaching.
Teaching in the networks takes place through the nets. So the nets are only an instrument for learning. Teachers and students are communicating through the nets, and the learning material can only be located to a server in a digital format. In this case we can speak about computer-based learning or distance learning (virtual school or university, telematic learning centre etc.) For example, in Finland there is the Freenet (http://www.freenet.fi) . In the www –based environments the information itself is emphasised and the teaching can be done via Internet and tutoring by e-mail. It is an easy way to find, produce and move information. Among the

weaknesses is the fact that different environments usually do not support each other functionally.

Ort+Edu in OrtoWeb

With the kind of background described above (The National Information Society Program and theories about learning and teaching in new learning environments), the local educational authorities in Liperi municipality and the Department of Applied Education at the University of Joensuu have planned a co-operative project. The focus is to develop Orthodox religious education, and especially its methods, by applying the possibilities of information technology and the Internet. The project is one of the top 17 projects of the Finnish National Board of Education that have started in 1999.
On the Internet the project ”Ort+Edu” is located at a www site called ”OrtoWeb”. Physically the OrtoWeb itself is part of a hard disk in a server of the Department of Applied Education at Joensuu University. The OrtoWeb with its projects is going to be a national Internet centre for Orthodox education as well as a centre for communication and information related to this topic.
The main target of the project is using the Internet to develop and test a national learning environment for Orthodox religious education to support it at Primary and Secondary Schools (Lower and Upper). Openness, flexibility and an easy way to achieve information are also among the reasons why this project has been started. In this way pedagogy will be renewed and the substance and varieties of material will be improved. The new learning environment makes it easier to obtain information, not depending on time and place; and in digital form the information can be reused in different ways. Other school subjects and all those who are interested in Orthodoxy can also make good use of this Internet site. For the moment it seems that from the inter-Orthodox point of view, there are no similar projects going on in the public school environment. From the point of view of pupils, time was passing by as far as the pedagogical innovations in religion teaching are concerned.
The detailed goals of the project are as follows:
To produce the technical base (www-site - > OrtoWeb)
To produce visual and auditory material on the Orthodox Church for the needs of Religious Education (R.E)
To produce learning material based on information technology and its possibilities
To make possible learning that does not necessarity depend on time and place
To test the learning environment in R.E
Materials
Learning packets
Communication teacher to teacher /teacher to parents
Communication teacher to pupil
Communication pupil to pupil
To do research on teaching and learning in this environment
To obtain feedback from the site and learning environment
To provide an easy access to information about Orthodoxy

The target groups are teachers of Orthodox religion, pupils, parents and students of Orthodox theology. The site is also open for all those who are interested in this subject, but for reasons of information security some discussion groups require the password.
Actually the project was started in the spring of 1998, when the www-site was established and html- material was produced and edited for the needs of this site. Teachers of Orthodox religion were informed about this new possibility to use the Internet environment in teaching. An asynchronous text-based discussion site was also opened for the needs of teachers and others who are interested in religious education. For the moment it seems that this did not

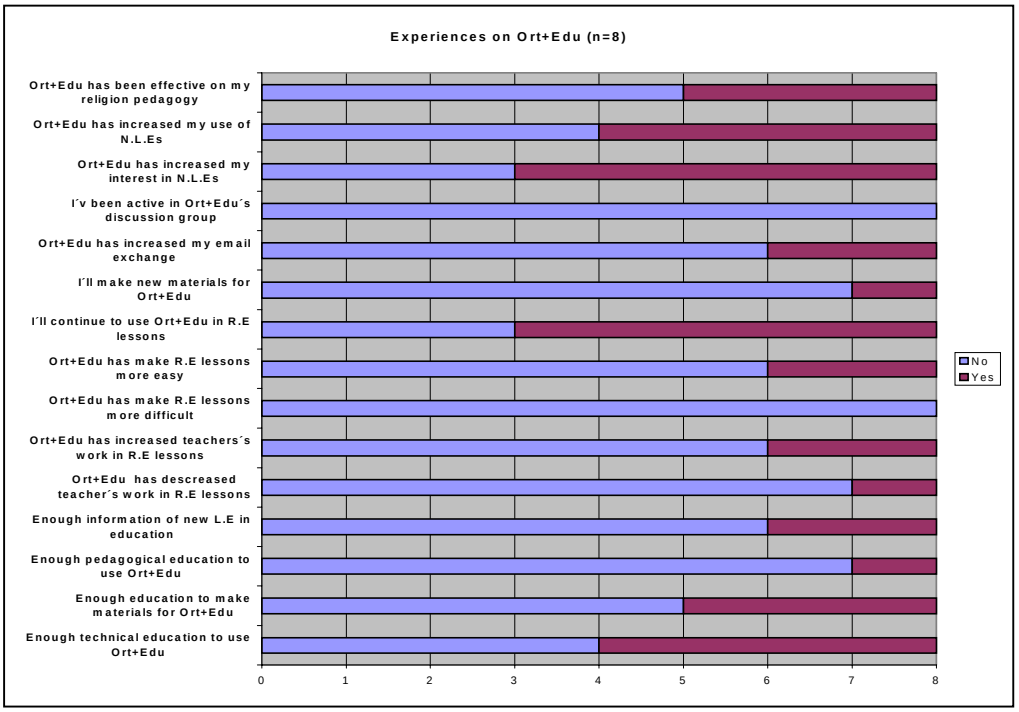
arouse very great attention among those 300 religion teachers. The small demand for for the discussion site indicates this. Only some usernames and passwords have been asked.
Among the users the discussion topics have been dealing with school laws concerning Orthodox religion, number of lessons per week, how the local authorities have made the study groups, etc. In a word, the topics have quite practical questions. It is clear that this www-site has awakened general interest. During the period when the hits have been counted (from 1st November 1998 until 30th June 2000), there have been more than 7000 visits.
The results of the university's course in updating of network material for Orthodox teachers had a marked impact on the site. The digital materials made by Orthodox teachers themselves were the answer to a great demand in spite of the product's slight deficiencies in technical level. A small study among the fulltime teachers of Orthodox religion (N=18) in eastern Finland shows clearly that the main uses of the new technology to assist teaching are word processing and the Internet.
The digital products mentioned above were the first ones in that form of teaching material. They show directly the possibilities to make subject-specific materials for the nets. Morover, which was more encouraging, with proper guidance, teachers are capable of moving their material-making routines from a "paper and pen" environment to digital ones. Of course, it is not just the ways and means that are changing. It is the whole tradition of thinking about making materials that has to be re-evaluate and reorganised.
During the spring of 1999, the information located in the Ortoweb was made good use of in teaching about the Orthodox Church and culture in a distance education experiment. The target group also obtained information about Orthodoxy from other Internet sources. The students received their assignments, as well as feedback about their answers, by e-mail. During the academic year 1999 - 2000 the Ortoweb will also be used in the basic teaching for Orthodox subject teachers being trained to teach in a elementary and secondary schools (lower and upper). For example, in a elementary school they are going to plan and put into practise a small period of teaching utilising computer-based technology in their teaching practice.

First results of religion education through the Ort+Edu

In the first phase the action model for this www-site is an asynchronic interactive learning environment. The efforts towards a synchronic environment will be made later. The needs for the interactive action model can be found from the lack of the modern media for communication between Orthodox religion teachers in the different parts of Finland. For the school classes this makes it possible to communicate with other Orthodox pupils in different schools. This is important because in an Orthodox study group there are usually only 3-15 pupils. Via OrtoWeb, inter-Orthodox contacts can also be made.
When we speak about modern media in communication we, mean not cellular phones but networks and networking. With the help of interactive communication, at least in theory, the teaching experiences, knowledge, teaching methods, teaching materials etc. can be shared between those teachers who are teaching Orthodox religion at primary and secondary schools. Information for colleagues could be organised easily and rapidly through electronic bulletin boards or by e-mail. This kind of peer couching or peer tutoring is a good way of learning from colleagues to promote new pedagogical thinking, teaching material and curriculum. In order sometimes in having a common study project the pupils can work together on a shared desktop located in the Internet. This will increase the ways of learning and ways of teaching.
The network environment is now tested in its first phase by a group of Orthodox religion teachers at primary schools during semester 1999-2000 (classes 1 to 6). About those totally ten teachers six are Primary Schools teachers and the rest of them are working on Secondary and High Schools. During the teaching experiment a teacher has planned a period of 4-6 hours. In this plan he/she utilises material from the Ort+Edu for this period.

There are several ways to use this material and web-site. A teacher can either use a so-called ready-made teaching packet with its texts, illustration and exercises or use the network information as an extra source when dealing with the teaching contents. For the moment, however, the selections are limited. The material can be also be produced by the teacher him/herself under the technical support provided by the OrtoWeb project worker. One possibility to produce material is to give learning tasks to pupils who then obtain information from the Internet. Their job is to reproduce the information and put it back, e.g. to a www-page. Teachers together with the pupils have used this environment just to get some information or to check something from the net without any other further going ways.
concerning the testing phase one, clearly indicates that pupils motivation towards the teaching contents has increased. The best results can be obtained by working in teams of two pupils. Also it seems so that during the lesson to a teacher there is not so much to do except advising the learners. Of course this is due to the teacher's pre-work before the lesson. Without the proper pre-work one can not manage successfully on lessons where the IT- technology is used.

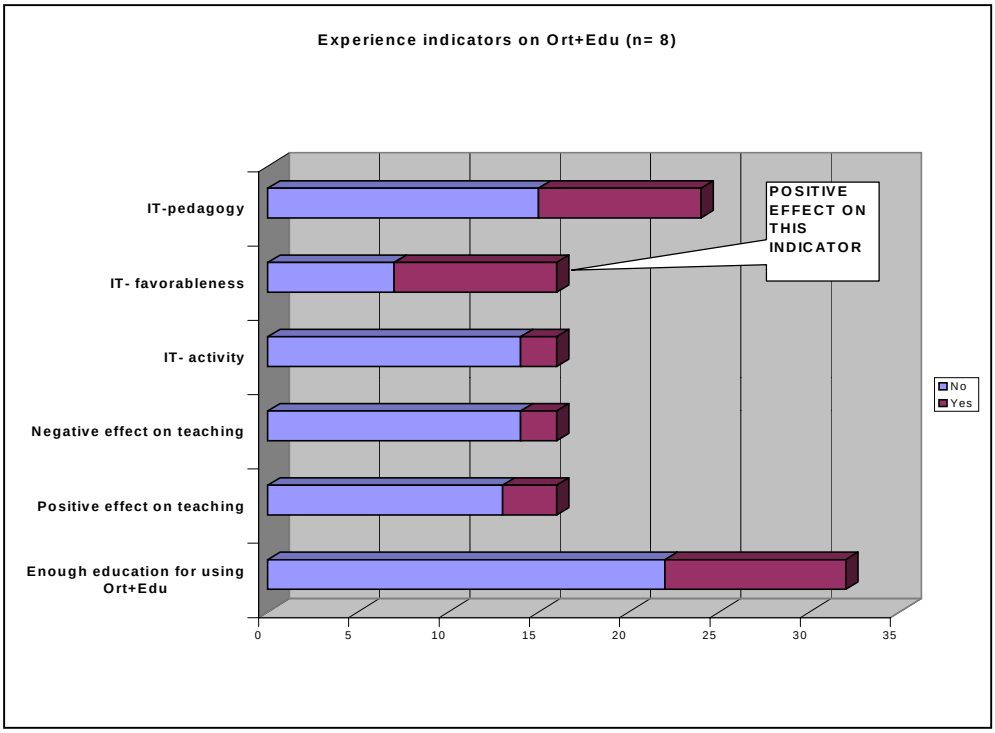
PICTURE 1. Teachers´ experiences on Ort+Edu.



As one can see from the picture 1 the positive effects on teacher's religion pedagogy and his/her use IT- technology has been quite slight. It can be assumed that this is mostly due to short period of teaching experiences in this environment. The main positive things are that the teachers are more than before interested in using IT based learning environments in religion education and they will continue its using in their work. The main obstacle for using the Ort+Edu during the religion lessons has been the lack of technical environment i.e computers and net connections. It so that those small study groups as orthodox pupils are, cannot always have their lessons in classrooms with proper IT facilities. That is why the IT based religion learning among this testing groups have to be organised in periods in IT classrooms.
What is still clearly missing is training the teachers to use the learning environment in spite of the fact that teachers spend during the semester almost two weeks on weekend courses. They

can produce teaching contents as www material, but they say that the technology itself seems to prevent to make proper pedagogical solutions. This means that teachers want the material is in an interactive mode, but this first phase of the Ort+Edu does not yet support that kind of use.

PICTURE 2. Experience indicators on Ort+Edu.



It is also clear that according the teachers the "IT based contents" are not enough for a teacher to use them in teaching. This means that it is not useful just to put for example icons or pictures of different churches to the Internet if they are not followed by pedagogical instructions or exercises. According to the results of the questionnaire this firs testing phase is a good evidence for that, because the teachers ranked as the biggest lack the lack of instructions for the using the different materials (see picture 2).

After this testing period one can describe the main steps as a model when utilising the new technology for the purposes of learning environments in learning and teaching. Those steps are:

Having a group of progressive and productive teachers
Educating them as www content producers (basic skills)
Planning and developing simultaneously an learning environment
Testing the environment in teaching
Collecting feedback after each testing or other developing period
Sharing the experiences with the colleagues in discussion groups
Starting a new phase guided by experiences of the previous phase

Is the net for R.E?

The target of OrtoWeb is not to "wire" Orthodox religious education in Finland. That would be impossible not only because of the huge amount of work but also because religious

education is not basically only a question of just providing information. It is a question of "living information". To a teacher this means bringing information to the practical level and living according to the information that he/she shares with the pupils. That is formation and it always needs a human touch in spite of the help of the technology in education. Adapting the Orthodox view of education through the Internet it is quite difficult to "taste and see" because there is a lack of dimensions and interactivity.

There is a big danger in IT based religion education that we just deliver models for religion behaviour in and for virtual reality and as fact cut the relationships to the real life. This is because of for a IT producer or a planner concerning religion education there has to be always in mind how to connect the contents to the living Christian environment. Therefore the task of developing an Internet-based learning environment for Orthodox religion education is enormous and very demanding. How to fix theology and technology or should we fix them and for what reasons?

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