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The Design, Development and Evaluation of Online In-Service Education

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THE DESIGN, DEVELOPMENT AND EVALUATION OF ONLINE IN-SERVICE EDUCATION

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1. CONTEXT

Information Revolution

Society on a global scale is undergoing an "Information Revolution". Much as the Industrial Revolution transformed society in the 18th Century so the Information Revolution is transforming society today. An "Information Society" is emerging, where access to information will form the basis of economic power. Countries must either embrace this revolution or else economically, be left behind.

The Internet is very much the public face of this information revolution. The Internet was developed in the 1960's in the United States, but remained primarily confined to the U.S. military and the universities until the early 1990's when it became commercially available to the public at large. Since then its growth has been exponential with over one hundred million people now connected and the number still rising.

Ireland has in many ways been quick to embrace this revolution. Ireland has encouraged the development of the high technology sector within the economy. Telecom Eireann invested heavily during the 1980's and 1990's to create a modern and sophisticated telecommunications network. Foreign computer and telecommunications firms have been successfully attracted to these shores, and the indigenous industries have flourished. Information technology industries have played a major part in the recent economic development and job creation in the country.

Ireland in other ways has been slow to embrace this revolution. The country currently has a major shortage of skilled computer, electronic and electrical technicians. The Government has recently announced an investment of £250 million to try and rectify this position. Investment in Information Technology, (IT) has been lacking in education at both at primary level and secondary level. The new telecommunications have not been as quickly exploited as has occurred in other countries, partially due to the high cost of communication here.

Information Technology and Education

Investment in Information Technology, (IT) has been lacking in schools both at primary level and secondary level. Schools are not well equipped with computers. The computer to pupils ratio is approximately 1 to 33. At both primary and second level most machines are not powerful enough to handle modern multimedia applications. Many schools are still not connected to the Internet and many schools do not have computer networks.

Recognising the problem there are currently a number of initiatives underway to try and improve the situation. The Government has launched "IT2000" involving an investment of £40 million

pounds in capital and training. Telecom is investing £10 million pounds in providing the Internet to all schools. The Irish Tech Corps is piloting a co-operative project bringing industry and education together. The National Centre for Technology in Education has been launched to co-ordinate the development of the use of IT in the education system.

Need for In-service Training for Teachers
Throughout the 1980's there were calls from numerous reports for improvements in the provision of in-service to Irish teachers. The 1991 OECD report marked a turning point and has acted as a catalyst for action. The role of in-service has been considerably enhanced over the last few years.

Today professional training and development is recognised as a lifelong process, not something to be finalised with the end of ones initial training or probation. Given the:

- Changes happening within society both globally and nationally,
- The changing nature and role of education, and
- The changing role of teachers

Education is in a process of transition. Teachers need ongoing, continuing professional training to be able to perform their duties effectively.

Limitations of Traditional In-service Delivery Systems
Research (see 2.3 of Thesis) questions the value of the short intensive in-service training course. Evidence shows participants remember little from the course and that it makes little or no difference to the way they teach. This type of short course is currently the norm in the provision of Irish in-service training.

Introduction of New Leaving Certificate Business course
The Leaving Certificate "Business Organisation" course is currently ending and being replaced by the "Business" course. Business teachers are currently receiving in-service training to teach the new course. This training consists of two, half day, short, intensive courses.

2. AIM

The aims of the project were:

1) To explore the potential of the Internet in the provision of Inservice training to teachers,
2) To design and develop a WWW site to support the delivery of inservice training, and
3) To evaluate the effectiveness of this innovative approach.

To explore the potential of the Internet in the provision of Inservice training to teachers.
The project explored whether the Internet could be used in the provision of inservice training to those Business teachers currently receiving Business inservice training. Could the Internet be used as the delivery mechanism replacing the existing delivery mechanisms, or could it act as an extension to the current day courses providing additional information and support.

To design and develop a WWW site to support the delivery of inservice training.
To examine how best to deliver inservice training over the Internet it was necessary to discover what was required by teachers from inservice and them develop an approach for how the Internet could best be used to deliver these requirements. The methodologies and best practices of the Internet in providing distance education, were transferred and applied to Internet delivery of inservice provision.

To evaluate the effectiveness of this alternative approach
Once the web site had been constructed it was evaluated both qualitatively and quantitatively to study the effectiveness of this alternative approach to the provision of inservice training.

3. PROJECT

Development of Web Site
The project involved the development of a prototype web inservice page for teachers of the new Business course. The page included content updates, access to resources, teaching ideas, access to a Business teachers newsgroup, and email access to the Business support team. The page also included a questionnaire to gain feedback. The page was tested with a pilot group before being placed on the Internet for evaluation.

Evaluation of Web Site
Over 300 schools with the Internet were emailed about the presence of the website. The approach taken to the evaluation had two main thrusts

1) A qualitative component using a small focus group.
2) A quantitative component using an on-line survey instrument.

4. FINDINGS

Role of Internet in Inservice delivery.
Those involved in the small scale study all felt the Internet had a role in the provision of inservice. With the large scale study the response rate to the web questionnaire was very low, nonetheless those who responded 72% felt that the Internet could have a role in the provision of inservice training. This was qualified on the understanding that all teachers would have equal access.

Issues Needing to be Addresses
Four issues or problems to be addressed emerged in both the literature and in the responses. These were

1) A lack of Time to use the Internet.
2) A lack of Access to the Internet.
3) A lack of Internet Experience and Skills
4) A lack of Acceptance of the Internet.

Best Practice
Based on the literature and the comments an inservice web page should be very simple, ultimately being reduced to only two vital requirements:

1) It should have "*content*" that teachers want and need.
2) It should be "*simple and intuitive*" to use.

Anything which serves the above two functions is a "good practice". Anything which does not is extraneous.

The page should make the user "want" to use it, and "want" to come back again.

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