INTEGRATING INFORMATION AND COMMUNICATION TECHNOLOGIES INTO TEACHER EDUCATION

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Information and communication technology has provided an important instrument for breaking down barriers which distance cooperation between educational institutions, both nationally and internationally. Experience in the use of information and communication technology in teaching shows that this technology can provide important help when teaching is to be planned and prepared to provide challenges to all pupils, while taking account of the background, ability and interests of the individual.

The area of teacher training is an important one to tackle, since it is the universities of education which supply the basic schools with teachers who will have to carry out the integration of IT in teaching. The aims of teaching make a number of extensive demands and expectations to teacher qualifications with respect to knowledge about, and experience with, the use of IT in teaching.

The main objectives of integrating information and communication technologies into teachers' training are as follows:

- Increasing students' awareness of the role of information and communication technology and ability to communicate knowledge about its social importance.

- Developing the competence for including IT-related topics and points of view into their professional, pedagogic and didactic considerations in connection with the planning of their ordinary teaching.

- Fostering a general knowledge of how IT helps to shape the conditions of education and work in society.

- Providing basic knowledge of, and skills in, the use of information and communication technology as an instrument in the daily preparation and teaching activities.

- Granting insight in, and experience of, various methods for evaluating the quality and utility of IT-based information, teaching materials and teaching environments.

The main challenge regarding the integration IT technologies into higher pedagogical education is not taking into consideration learners' social, personal, and professional background and failing to see learners' various motives, background knowledge and aspirations which all affect the outcome of the learning process, which could be briefly summarized as the problem of personalization.

The importance of adapting IT tools to learners' needs urges and encourages scholars to search ways to enhance the efficiency of computer-based instruction and correct shortcomings through interaction, the use of authentic and contextualised tasks and self-reflection. To adapt education to the future needs of learners, decision-makers have to listen to the culture of the learners, review their pedagogical models and study the process of knowledge acquisition. Research shows that knowledge acquisition is only valid if it can be applied to a specific context. Some of these points require close examination.

Increasing student interaction implies that two or three students can share a computer and interact with the computer, Internet, software and each other. Students need guidance and structure to use computers to enhance learning. University teachers may need to spend some time organizing the students and clearly defining the intended outcomes of their computer experiences.

Contextualisation of tasks suggests introducing project programs. Real world applications motivate students to use their skills to solve problems in real situations rather than the meaningless problems found in text books. A computer can also take a group of students on a field trip to a far away world without ever leaving the classroom.

The advent of technology sets new challenges for scholarly research. Current preservice teachers would find it cumbersome, frustrating, and almost impossible to complete the requirements for teacher certification without using technology. Research no longer consists of going to the library to sign out a book but rather accessing the library online. This has allowed preservice teachers to access information from around the world and become scholarly educators by reading professional journals and gathering information for group and individual presentations as well as research papers. However the problem of downloading ready made materials is still a great hindrance to integrating IT technologies into teacher preparation. The prospect of conducting computer-assist research will be made possible only in case the themes of research projects are reconsidered and reformulated towards further creativity and cognitive flexibility on the part of a learner.

Finally, most scientists emphasize the educational role of the hypertext as multiple connections that can be achieved may very well serve to bolster the possible associations that can be attached to any one topic, thus broadening and widening perspectives and working to eliminate disciplinary boundaries. Indeed we have to pay tribute to hypertext as it facilitates the establishment of connections between different forms of representation. The ease at which various sorts of information can be connected may serve to reduce interdisciplinary boundaries and help students to draw connections between multiple types of knowledge forms.

If to view aims of education teaching students to be integrative thinkers and respond to a world characterized by change and interconnection hypertext seems to make sense. Due to it students would be able to take a more active part in their learning, and then transfer easily what they learn from one context to another. Studying the dynamic of interactive reading via hypertext is thus a model for studying integrative teaching and learning in a global world.

Integrating technology into the curriculum is not an easy feat. It requires a great deal of thought and patience: thought to ensure the appropriate technology is being used to increase student achievement and patience to ensure that teachers feel comfortable with the new technology.