Critical Elements of Successful Faculty Development
In Information and Communication Technology

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The almost infinite potential educational uses of information and communication technology (ICT) will only be realized when most teachers have sufficient knowledge and skills to truly integrate ICT into their curricula, utilizing it to make teaching and learning more effective and efficient. For this to be accomplished teachers must experience the integration of ICT into their own pre-service learning as well as into the pedagogical skills they are taught. Teacher education faculty responsible for the pre-service experience of teachers must themselves develop high levels of knowledge, integrative skills, and comfort with ICT. It is the professional development of teacher education faculty that is the focus of this paper. The critical elements of successful faculty development in ICT presented here are drawn from the experiences and evaluation of roughly a year and a half of providing development activities for the faculty of a large, public, urban school of education in the Eastern United States.

At the start of the project the most common uses of technology reported by faculty were word processing and accessing e-mail. Due to lack of knowledge most required assistance to complete a modified version of the School Hardware Technology Survey [1] describing the basic features of their office computer hardware and software.

The principal immediate goal of the project was for the faculty to acquire specific basic knowledge and skills regarding computer hardware and software. The principal medium-range goal was that faculty would develop technology related products or projects that would result in more effective and/or efficient teaching and learning of a unit of a teacher education course. A long range-goal was the modification of the teacher education curriculum to reflect greater integration of technology and to meet technology standards of various professional organizations and government agencies.

The main focus of the intervention was the provision of staff development activities to increase the faculty’s level of ICT proficiency and enable faculty to integrate technology into coursework. Development activities followed a constructivist model that included the following elements: hands-on workshops, project-based learning, and learning teams of mutually supportive members. Central to the model was the requirement that each faculty member develop a technology product to improve the effectiveness and efficiency of teaching and learning one unit of a course they were currently teaching. On the basis of a range of data—survey questionnaires, focus group discussions, individual interviews—the following have been identified as critical elements to successful faculty development in ICT.

1. Clear, Specific, ICT Standards-Based Objectives

Development activities work best when they are tied to meeting ICT state, national and/or professional organization standards and these are articulated in terms of performance outcomes. In the case of our project we focused on the standards of the International Society for Technology in Education (ISTE), and required that faculty develop technology projects to assist faculty and pre-service teachers to meet ISTE standards for teachers and help K-12 students meet their respective standards.

2. Basic Knowledge about Hardware and Software

For faculty with very limited knowledge about ICT the fear of damaging equipment can be high. The result can be great hesitation to engage in trial and error experimentation which is one of the best ways to learn. It is therefore important that development activities start by providing basic knowledge and skills about the hardware and software to minimize the fear of experimentation. In our project, following numerous requests for individual assistance by faculty who lacked the most basic knowledge about hardware and software we developed several tutorials.

3. Project/Problem Based Learning

Faculty are most likely to acquire ICT knowledge and skills when it is tied to their content areas of teaching and research, when they identify specific ways in which ICT can be used to improve teaching and learning in their own content area, and when they are assisted to identify, modify or create specific products that are tailored to their unique needs. In our project faculty were provided with a
set of guidelines to facilitate this process. Perhaps the most important of these was that they identify a specific course and component of the course, the teaching and learning of which would be made more effective and/or more efficient by the incorporation of ICT.

4. Hands-On Workshops and Ongoing Technical Support

Hands-on workshops that engaged the faculty at the start of their development activities were very important. Even more important however, was ongoing technical support as they engaged in identifying their ICT needs and creating their projects. Of particular importance in our project was having an ICT specialist who was not only very knowledgeable about technology, but was an effective and patient teacher who made faculty feel comfortable from the standpoint of their limited technology knowledge as he helped them acquire new skills.

5. Effective Incentives

In many respects the “rewards” provided to faculty for developing ICT knowledge and skills may be the most critical element. Of the range of possible rewards the most effective may be psychological and social ones (e.g. meeting state, national and professional organization standards, or keeping up with colleagues who are using technology), rather than the economic ones (e.g. being released from teaching a course during or following the acquisition of ICT skills). In our project the first of two groups of faculty who signed up for ICT development activities did so largely out of interest in keeping abreast of changes in the field of education and the desire to improve their teaching and professional knowledge. The fact that we offered the incentive of a course release at the end of the process did not seem to be their primary motivation, since many were not even aware of the incentive when they first agreed to participate. The salience of the psychological and social incentives was even greater for the second group of faculty. Having directly and indirectly heard about the experiences of the first group for an entire semester, the 2nd group was so eager to participate that many engaged in precursor activities such as taking workshops on their own so that they would be better prepared when the development activities started.

References


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