

# Faculty of Education Staff Development— Support of Tomorrow's Teachers

Cheryl Goodale  
Department of Education, University of Alberta  
Edmonton, AB Canada  
Cgoodale@ualberta.ca

Mike Carbonaro  
Department of Education, University of Alberta  
Edmonton, AB Canada  
Mike.carbonaro@ualberta.ca

Fern Snart  
Department of Education, University of Alberta  
Edmonton, AB Canada  
Fern.snart@ualberta.ca

**Abstract:** Supported by teacher accreditation organizations promoting technology standards for teachers, and supported by teacher recruiters who are striving to hire new teachers with technology skills, education departments and faculty members are investigating professional development regarding technology. This paper describes an innovative study that collected data through personal interviews from one hundred members of a faculty of education to ascertain views of professional development and professional development needs. Faculty responses provided the field of professional development for educators a more coherent and comprehensive view and linkage with present theory and a foundation for a new model of professional development for faculty involved with educating pre-service and active teachers.

## Introduction

Faculty members in departments of education are interested in the impact of technology on education. Faculty members interested in their own professional development regarding technologies to support preservice and inservice teachers are supported by organizations such as the International Society for Technology in Education (ISTE), the American National Council for Accreditation of Teacher Education (NCATE), Canadian provincial governments responsible for education such as Alberta Learning, and by teacher recruiters. ISTE is recommending and NCATE is adopting the inclusion of educational computing and technology standards in the American accreditation for teachers. The Department of Learning in Alberta is including the integration of technology in the provincial curriculum objectives (Alberta Learning), and one superintendent in Alberta is stating a preference to hire only teachers with a strong technology background (University of Alberta, 2001). With interest from faculty, and promotion of technology from accreditation and government bodies and teacher recruiters, this research study was established to better understand professional development for faculty with regard to technology to ultimately support pre-service and in-service teaching/learning.

Wilson and Berne (1998) completed research in the field of professional development for educators, and their work reinforces the need for this study. Wilson and Berne conclude that professional development for educators is only successful if educators drive the content and opportunities themselves. In order to create or enable professional development opportunities for faculty in departments of education in universities, this research study was initiated to investigate the professional development needs.

## **The Study**

The research study used a convenience sample—all one-hundred and twenty faculty and administrative members within one Faculty of Education were invited to participate in the study by meeting personally with one of three experienced graduate student interviewers. Of the 120 invited for interviews, 100 participated. Confidentiality and security measures were implemented and communicated to participants. The interviews were taped and transcribed. The data was then carefully read and sorted and entered into an electronic database where data could be resorted, queried, and classified. Findings were condensed and presented back to the faculty at an open invitation meeting extended to all 120 invitees.

## **Findings**

Responses from faculty member participants (faculty members) in the study provide practical information on what professional development means in their world of work, what they want to learn in the future and how they want to participate. Responses from faculty members also provide the field of professional development for educators a more coherent and comprehensive view and linkage with present theory and a foundation for a new model of professional development for faculty involved with educating pre-service and active teachers.

### **Perceived Technology Needs of Pre-service and Service Teachers**

Faculty members in the study identify technology areas they perceive to be most important to pre-service and in-service teachers. Teachers need to be comfortable learning technology continuously from a variety of sources including their students because technologies are so rapidly changing and evolving. Teachers need to learn to use technology responsibly, to effectively integrate technology with the curriculum, seek creative ways to use the technology to enhance learning, and to use technology to their advantage in their administration. Teachers need to learn to think critically of technologies, to critique materials and equipment, ask what the technology can be used for, question sources of information, consider gaps in accessibility, and consider issues, impact of technology and ethics. To support these perceived technology needs of pre-service and in-service teachers, faculty members seek professional development opportunities. When asked about professional development involving technology, faculty members identified what they are interested in and how they would like to participate.

### **Faculty Member Participants Choose What to Learn**

Participants in the study identify the major barrier to professional development as “lack of time,” therefore, when determining what to learn, participants indicate a real need to be selective because there is so much available it is impossible to get to it all. “There is no way in hell you can read it all” (faculty member participant #42). “Need to look real hard for professional development opportunities that will nourish” (85). One participant was appreciative when the technology group selected and recommended training. “Moved to different email and professional development was setup to go with it—that was good” (65). Faculty members state that they are very busy within their own area of interest and want people involved in the technologies to keep them informed; they want people involved in the technologies to be their watchdogs for new and emerging technologies. Participants are also looking to people with experience using any of the technologies to share best practices. In addition to faculty searching for information about technologies, technology specialists and colleagues using technology can help faculty members overcome their lack of knowledge about what is available. “We don’t even know what we don’t know” (67). Faculty members want a smorgasbord of choices and they want to be sold on the technology. “Someone has to show me good examples and illustrations how technology might be used. A supermarket presented in a way accessible to me. I’d say, I could use that. I’d then need people to help me learn and develop the expertise. I have to see it to see how it would fit what I am doing (67). Faculty members want to learn about everything from “leading edge whatever” (40) to “pretty basic stuff” (28) and they want to

use technology “more effectively, more broadly” (27). For example, faculty members want to investigate how to better search and store, communicate, use bibliographic tools and research analysis programs, integrate technology with curriculum, and use technologies in their planning, teaching, research and management.

### **What Professional Development Means to Faculty Member Participants**

Faculty members indicate their professional development is every day, it is self-directed and it is eclectic. Participants practice skills, investigate what is new and what the technology is capable of, what special requirements would be required, and the purpose. Faculty members self-learn and learn from sharing experiences and best practices. “Talk with people, watch what they are doing, figure out if we can do it that way” (22). Faculty members learn by belonging to professional organizations and by going to and giving presentations. Presentations are “invigorating and informative” (36). Participants also identified reading, reflecting and research as part of their professional development. “Teaching is professional development, writing and research is professional development” (19). Faculty members also learn from local events, documentation, help systems, and tools and services.

Faculty members indicate they want to learn and refine their skills using technology to communicate with student applicants, students, cooperating teachers, teachers, administrators, and colleagues worldwide. Faculty members also want to investigate how technology affects teaching/learning, the integration of technology with the curriculum, the relationship between technology and their area of interest, the impact of technology, gaps in access, ethics and issues regarding technology to support pre-service and in-service teachers.

### **Practical Professional Development Opportunities**

From a practical view, participants identify logistics and characteristics of ideal training initiatives. Demonstrations to preview new software. Bring your own projects workshops, “bring your own data and have a website built in a day” (13), for example. Relevant content with immediate application if it is to be learned and retained. Interaction within courses or workshops with an instructor or students rather than a technology. Faculty members want delivery to be hands-on and interactive. Any demonstrations or courses need to be offered fast, one-half day courses for instance, and they need to be offered multi times so faculty members can choose times to fit their schedules. One-on-one is ideal, but small class sizes and homogenous groups. Objectives need to be included in the course description. The instructor should not assume students’ skills, experience or levels of expertise. Instructor needs to break away from computer jargon and speak in plain language. An overhead needs to be used to display computer screens and the instructor needs to physically navigate throughout the room to help everyone keep up. Faculty members want instructors to have better facilitation skills to keep themselves and the class on track and to handle questions that typically hold up the class or divert the class from the objectives.

Faculty members are also suggesting that workshops and courses, no matter how good, need follow-up. “The follow-up must be very specific” (98). “Tutors available after the workshop” (76). Follow up by documentation, help, tools and services, or a community of learners to draw help from. “How do I know about the guy in biological sciences working with similar graphics when I want to do something in graphics” (16). Participants also recommend people in the department become champions of processes to turn around and teach or help others in the department. Participants also suggest the need to find training and support from software companies. Help can be from formal sessions, from informal sessions or online. It was suggested that it is not productive to learn without help. “Learning without help is not an effective use of my time” (86).

All colleagues use hallway help by asking their neighbors for quick verbal help at the time they need help, by having a colleague drop by for a few minutes to provide direction, by informal chats to pick up on tricks and tips, and by faculty working and learning together. Participants described extensive use of and appreciation of hallway help, but draw our attention to their feelings of taking up too much of colleagues valued time, thus they are recommending a formal registry of faculty who can help, a help desk, and house call help. Participants want help available when they need help on whatever topic or program they might be stuck on. Help is requested for horizontal or generic programs such as word processing,

spreadsheets, databases, presentation packages and website development, and help is requested for vertical or specialized training programs such as the research analysis tools. Help desk help can be a formalized help phone line or email, but it can also include a registry of people with expertise who are willing to share or teach others at a specific time or place. An immediate response is preferred but faculty members recognize replies might be delayed depending on the complexity of the question. In addition to wanting a help desk, participants also request house calls. Participants can see the value of house calls to increase their productivity—for a person to come in and help with a specific application or project, to come in and watch to improve efficiency, or to come in and make technical adjustments. One participant makes us aware that some people do not want to read to learn, they want a personal visit. “No, I don't want a list of steps, I want face-to-face, hand-to-hand, I want to have my private tutor” (22). Others, however, are redefining a personal house help call to include an electronic connection. “Want someone to come into my office by linking by speaker phone to walk me through it - like yesterday C&S [Computing and Network Services] walked me through a complete change, it took about 40 minutes” (23).

Faculty members identify tools and services that could be provided to help them with their use of technology. Tools such as grade management programs, centralized databases, telephone answering equipment, virus protect programs. Templates or forms that are user friendly, and advertised and made accessible to faculty members. Services for one-time or once-a-year projects such as a poster or for one-time long-time tasks such as scanning. Faculty members identify the need to have equipment/software and training available and accessible, and constant technical and application support.

## **Professional Development Model Emerges**

Based on input from faculty members, a model for professional development involving technologies emerges. Participants need a system or infrastructure in place to support training and development and an ongoing follow-up system, professional development activities rooted in constructivism, and delivery in line with andragogical principles.

Just as Moore & Kearsley (1997) raise awareness of the need for systems theory when working with technologies, faculty members identify the need for an infrastructure to be in place. The infrastructure is needed to support access to technologies, technical support, professional development training activities, ongoing follow-up support, and a community of users and specialists to draw on. Drawing a comparison, the faculty members' infrastructure equates with Moore & Kearsley's need for systems theory or an interrelated and interdependent system in place to support the use of technology.

When professional development activities are designed, faculty members are demanding principles of constructivism to learn technology in context with their work and with their prior knowledge (Crawford, 1998). Supporting constructivism and the faculty members' recommendations, Wilson and Berne (1998) conclude that professional development for educators is only successful if driven by the educators themselves.

Faculty member participants demand a learner-centered approach in the design and delivery of professional development activities, an approach Boettcher (1999) claims is relevant to both constructivism and andragogy. The learner centered approach to include relative objectives and concepts, interaction with instructor and students rather than the technology, design and delivery tailored to specific learning styles, in plain language, delivered individually or to small numbers of participants, in homogenous groups, by a facilitator trained to keep the class on task, in short courses offered at multi times. The learner centered professional development activities need to be project based, fixed achievement, variable time (10). Boettcher's (1999) conclusions promote relevance of content, participation of learners in the design and implementation stages of the course, self-directedness, facilitated learning and linking of resources to learners, reflection on experience and knowledge, and collaboration or interaction between instructors and learners and among peers to support problem solving and critical thinking. One participant summarizes with the need for adult education. “Need the basic principles of adult education, they need to know how adults learn and apply that to their education designs” (10).

## Contribution to Tomorrow's Teachers and the Profession

Although this study is limited to faculty members, other faculties of education may be able to identify with what faculty members in this study want to learn and how they want to participate in professional development. The underlying goal being to discover and disseminate knowledge about the impact of technology, and the integration of technology with teaching and learning to tomorrow's teachers and to fellow colleagues.

Faculty members in departments of education are recognizing the need for both pre-service and active teachers to learn to continuously incorporate technology and become comfortable and innovative in their approach to technology throughout their teaching career. Pre-service teachers need to learn to use the technology to meet accreditation standards. As researchers, faculty members are also interested in what the effects and affects are of technology on learning, and they are interested in issues regarding the present and future use of technology. In their own professional development, faculty members are interested in how technology is or can be implicated within their area of expertise, their teaching, and in their research. Faculty members recognize the need to participate in professional development opportunities to extend their learning and to model attitudes and approaches to technology to tomorrow's pre-service and in-service teachers.

## References

- Alberta Learning. (2001). Online [<http://www.learning.gov.ab.ca/ict/>]
- Boettcher, J. (1999). Pedagogy and learning strategies. Online [[http://www.andragogika.cz/learn\\_s.htm](http://www.andragogika.cz/learn_s.htm)]
- Crawford, R. (1998). Teaching and learning IT in English state secondary schools – towards a new pedagogy? Teaching and Learning IT. Online [<http://www.btinternet.com/~R.A.Crawford/ITPED.HTM>]
- International Society for Technology in Education (ISTE). (2001). Online [<http://www.iste.org/standards/index.html>]
- Moore, M., & Kearsley, G. (1997). Study guide for distance education: A systems view. Online [<http://www.gwu.edu/~et/deguide.htm>]
- National Council for Accreditation of Teacher Education (NCATE). (2001).
- University of Alberta. (2001). Online [<http://www.quasar.ualberta.ca/edit202/team202.htm>]
- Wilson, S., & Berne, J. (1998) Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. *Review of Research in Education*, 24, 173-206.