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ICT and Initial Teacher Training

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Comments on the research review, focusing on the topic «Teacher students' internship»

Suggested questions :

- Student teachers need role models and there must be possibilities for them to practice integration of technology.
- Is there a 'best practice' in this respect?
- What are the different roles for different categories of teacher educators?
- Is there a need for closer collaboration?
- Are there differences between different groups of teacher educators regarding the attitudes and use of ICT – men and women, different subjects, etc.?

Although, as duly mentioned in the draft research review, «several researchers have found a crucial point to be how students are able to use computers during their practice periods», it seems that ICT are far from being systematically and widely addressed in the pre-service teachers' internships. At the University of Montreal, for example, it is only since the year 2000 that ICT have been progressively integrated in the internships. In fact, it is rather indirectly integrated since there is no obligation to use it in the classroom; it stays to the discretion of the student and the mentor teacher. What is systematically done with technology is that there is a mandatory use of a forum for discussions between students and the production of a portfolio by the students to present the competencies they have developed. Despite the fact that these two uses are rich pedagogical applications of technologies, they contribute to the learning process of the pre-service teacher, but do not directly concern the use of technologies by their students. This is one of the major weaknesses of the education programs identified by the 2001 OECD report on ICT in education. Furthermore, ICT integration in the classroom is yet not systematically evaluated at the end of the practicum. But this specific situation, showing University of Montreal as not strongly integrating ICT in field practice, push to front another issue: the fact that many

initiatives and innovative practices take place outside the official institutional structure. As the department supervisor of the ICT courses in the early '90, I often tried but failed in asking the practicum staff and supervisors to integrate ICT in their objective, activities and evaluation. I then propose to adapt a new mandatory course called Integration laboratory in such a way as to have students to go in a real classrooms, identify a pedagogical problem with the teacher and then to develop a pedagogical scenario with the required educational material and to test it in the classroom with real kids. Students had already followed a first year class introducing ICT in education and had experienced a development methodology supported by a web guide. The second year laboratory also provided 40-50 technopedagogical workshops on different technologies and educational applications (forums, web development, spreadsheet for educational uses, web search, etc). The purpose was to provide learning ICT activities in a meaningful and realistic context, to offer workshops that fit the specific needs the students experienced when confronted to the pedagogical problem they specifically addressed. This initiative was abandoned when the new program was launched in 2001-2002 on the basis of the assumption that ICT are transversals and that they should not be addressed by two specific courses. In some programs they kept one initiation course and in others they did not. In anyway, let's go back to the review.

The review suggests five specific factors as significantly contributing to this lack of integration :

- 1- the future teacher's degree or level of computer literacy,
- 2- the value placed on ICT by future teachers,
- 3- a future teacher's expectations of success in integrating ICT,
- 4- pedagogical integration of ICT by faculty members,
- 5- pedagogical integration of ICT by the mentors.

The review presents research works addressing these five factors from different perspectives and in doing so, provides more insights on the role that they are likely to play. A sixth factor then comes out raising in contradiction with a major assertion made in the introduction (second paragraph) of the review: «According to many surveys, this is no longer a problem related to the lack of availability of technology in schools.» Students report the lack of equipment (availability and not being up-to-date) as a factor impeding their use of ICT. Many other researches will do so over the rest of the review.

Another factor identified by students (and also teachers) is the lack of time. This issue should be developed in more depth since it is linked to many important dimensions of the education programs and applies to the context experienced by all involved actors.

Short question-answer section

- **Student teachers need role models and there must be possibilities for them to practice integration of technology.**

Yes, this is a basic learning strategies known for years. The apprenticeship approach has proved to be effective (many not efficient for a large numbers of students since it is resource consuming). In fact, cognitive apprenticeship was a dedicated word in the '90 for educational technologist, and may have lay ground for the concept of community of practice.

But finding mentors for every student is an important problem and the solutions proposed (online expert mentoring and video support) in the review may help but not resolve the problem.

- **Is there a ‘best practice’ in this respect?**

Since the context varies a lot, the solution should do alike. No «unique best practice» may apply to each and every situation. Different strategies should be developed to better fit the situations. General recommendations may help to orient our quest for solution and provide a conceptual framework.

- **What are the different roles for different categories of teacher educators?**

I do not think that the roles should be that different for faculties or mentors. Of course, faculties may address more theoretical dimensions of teaching but they need to be knowledgeable of the conditions and constraints of classroom daily life. And Vice versa. A major problem of schools of education that have been often mentioned by students is that it is too much theory oriented and not enough anchored in the real life of the teacher. In fact, both, the mentor and the faculty should gain insight of each other reality and richness. Researchers (faculties) and practitioners should benefit from sharing their expertise. I think the same about matching teachers and pre-service teachers in their competency development activities. ..

- **Is there a need for closer collaboration?**

A closer collaboration is more than needed. But the main stream culture of these actors and lack of time are probably the worst problem to deal with. Lack of time is even worst than it seems since the professional tasks of the teachers (and faculties) are already way over. For example, one or many of these situations apply to most of us and them : the number of students per class is growing, the schools now integrate special need students in classrooms without providing enough professional development and resources, integrating ICT require to spend some time in reflecting on teaching and re-conceptualizing the entire way, new programs based on competencies require the same.

- **Are there differences between different groups of teacher educators regarding the attitudes and use of ICT – men and women, different subjects, etc.?**

We can probably see differences regarding the attitudes towards and uses of ICT but are these really justified. Couldn't it be our perception and experience that shapes our practice? Learning is learning and should be a dosage of simple to complex set of basic activities and should require basic learning skills that apply to most topics. They may be more of this and that in some disciplines but a concept is a concept, a skill is a skill... Didactics offer insights for solving problems specific to learning in a given domain, but most of the learning ingredients are the same. Technology uses may vary according to the type of competencies and skills (abilities), certain features and uses of technology should prove to better fit the teachers and learners needs of a specific domain. Community of practice dedicated to specific domains may help specialists to gain and shared their expertise from each other inputs.