

# **Relying on Educational Technology to Train Minority-Language Teachers in Canada**

**Thierry Karsenti**

Faculty of Education  
University of Montreal

**Diane Lataille-Demore**

School of Education  
Laurentian University

**Michel Demore**

School of Education  
Laurentian University

## **ABSTRACT**

In Ontario, Canada's largest province, there is a significant shortage of qualified French-speaking teachers. Moreover, although many schools employ some teachers who are not fully qualified, it would be unthinkable to remove them from the classroom for further training, given the lack of teachers. To cope with this challenge we launched a distance teacher training program. Early into the program, the candidates found that distance education was insufficient to help them meet the challenges of classroom teaching. After conducting interviews with our prospective teachers (n = 125), we realized that the theoretical content provided through the distance program needed to be complemented by classroom observations. However, this appeared to be impossible in the circumstances. In this paper, we highlight the findings of our study on the use of educational technologies to train minority-language teachers in Canada.

## **Introduction**

Canada is the world's second largest country by total area, occupying most of northern North America from the Atlantic Ocean in the east to the Pacific Ocean in the west and northward into the Arctic Circle. For its ten provinces and three territories, Canada must offer education in either English or French, the country's two official languages. This raises many challenges, particularly in areas or provinces where one language, usually French, is a minority language. For example, in Ontario, Canada's second largest province, there is a significant shortage of qualified French-speaking teachers. Moreover, although many schools employ some teachers who are not fully qualified, it would be unthinkable to remove them from the classroom for further training, given the lack of teachers.

## **Context**

In order to cope with this substantial challenge, we decided to implement a distance education program for minority-language teachers in Ontario (French-speaking teachers). However, the candidates quickly raised some issues, pointing out that the theoretical material they received needed to be complemented by classroom observations, both to make the course more accessible and to ground the course in reality. Basically, they felt that distance education alone would not fully prepare them to be qualified teachers. They believed that distance education would not give them a proper, professional teacher education. This request raised another substantial challenge, because the program they were following did not provide the classroom observation hours or internship opportunities included in the regular teacher-training programs held at the university. The candidates wanted the classroom brought to them, and at times outside regular school hours.

The solution was to develop an online teaching resource (Cyberprofs, see Figure 1). Cyberprofs contains over 75 video clips of authentic, in-class pedagogical activities and interactions, with comments by experts, teachers and pupils. When creating this resource, care was taken to preserve the spontaneity and naturalness of the people and activities filmed, an essential element in vicarious learning through modeling and imitation (Bandura, 1997; Poppers & Lipschiz, 1993). These videos can be used to train teachers in Canada and abroad. Each year, the site receives over 200,000 visits ([www.cyberprofs.org](http://www.cyberprofs.org)), which clearly underscores the need for this type of online teacher resource.

## **Objective**

The objective of this study was to better understand the successes and challenges inherent in the use of educational technologies to train minority-language

teachers in Canada. More specifically, we wanted to understand the impact of a variety of freely and continuously accessible online video clips on the quality of distance teacher education.

## **Theoretical Framework**

### ***Impact of videos on initial and ongoing teacher training***

A review of the literature on the use of videotaping in initial and ongoing teacher training reveals eight potential impacts: the possibility of anticipating and preparing for teaching practice; the possibility of analyzing real-life teaching and learning situations; the possibility of analyzing educational events; the possibility of linking theory to practice; the possibility of developing useful competencies *in situ*; the possibility of fostering reflection by either self-observation or observing others; the possibility of overcoming distance; and the possibility of using diversified learning models. This section addresses three of the impacts that are relevant to our research objective.

### ***Possibility of anticipating and preparing for pedagogical practice***

The primary potential impact of videotapes on teacher training is that they allow teachers-in-training to anticipate actual classroom situations so they can better prepare for them. Thus, according to Sherin, "Video allows one to enter the world of the classroom without having to be in the position of teaching in-the-moment" (2004: 13). Similarly, incorporating videotaping into training programs gives teachers an opportunity to appreciate the realities of classroom teaching and learning. To develop this potential, authentic situations should be used. This use of videos as authentic depictions of real-life situations can be contrasted with a second use: selecting only clips of "good practices" as models for teachers in initial or ongoing training programs. In this case, the video is used as a model for teaching practices that follow recommended practices (see Oonk *et al.*, 2004: 137). The new self-directed training module was developed based on this perspective.

### ***Possibility of analyzing the teaching-learning situation***

For some authors, videotaping replaces and even improves on direct observation. Sherin (2004) identified two advantages of videotapes over direct observation: videos provide a permanent record that can be reviewed anytime (2004: 11-12); and they can be collected and edited (2004: 12-13) using, for example, "hypermedia programs." Elaborating on the above two advantages, Sherin notes that video recordings allow teachers to develop new competencies as they pursue their training programs (2004: 13). For instance, they can analyze educational events and relate theoretical notions to practical situations. Due to their computerability, videos can be used to capture concrete, specific pedagogical points (Le Fèvre, 2004: 236, 139). Videos do this through two capabilities: (1) they can convey the complexity of the teaching-learning situation (Le Fèvre,

2004: 239; Seago, 2004: 274); and (2) data and meaning can be extracted from a complex corpus of events so the viewer can focus on particular educational events (Seago, 2004: 274). According to Abell and Cennamo, videos can also be used to compare practices laterally (between classes) or longitudinally (over time in the same class). Similarly, videos can be used comparatively to identify different teaching strategies (2004: 114). Moreover, when experts and novices are placed in contact through communication technologies, including videos, teaching strategies are no longer compared, but shared. Finally, some see videos as a way for future teachers to explore the teaching process (Harvard, 1990) and its various approaches (Fisherman, 2004: 202). This applies equally to experienced teachers, for whom videos serve as a vehicle to discover new approaches (2004: 202). Furthermore, because videos present educational points in real-life situations, they are also perceived as a way to link theory to practice, the abstract to the concrete (Campbell Stephens, 2004: 99; Oonk et al., 2004: 161-162; Rosean *et al.*, 2004: 171; Goldman *et al.*, 1990). For Seago, the video is more than a practical extension of theoretical training; it responds to the need for a primarily practice-based training (2004).

### ***Possibility of stimulating reflection***

Video recordings foster reflection on teaching practices in two forms: (1) self-observation, where teachers-in-training view playbacks of their teaching lessons (usually simulated); and (2) observing others, where teachers-in-training view videos of other teachers. Whether oneself or others are observed, the video prompts teachers-in-training to engage in a first-level reflection as they review their teaching performance. Abell and Cennamo argue that a video recording can become "a perturbation for some students, catalyzing them to question their ideas, beliefs, and values" (2004: 117). Le Fèvre explains that videos help future teachers discover their own beliefs about teaching (2004: 248). This reflection process is comparable for in-service teachers. Self-observation and observing others allow teachers to step back from their actions and contemplate them from a different standpoint (Le Fèvre, 2004: 237-238), which is the beginning of an awareness of their teaching practice. Most authors acknowledge the key role of videotapes in encouraging future teachers to reflect. However, self-observation is not the only way to motivate teachers to reflect on their practices. In fact, observing others exposes teachers to expert practices, which can further stimulate their reflection through the variety and quality of the recordings presented. For this reason, we have opted for this method in our new program.

## **Method**

In order to better understand the successes and challenges inherent in the use of educational technologies for distance teacher training, we administered a

questionnaire and conducted individual interviews (n = 12) and focus groups (6 focus groups of 20 teachers-in-training). Data was collected on the effectiveness of educational technologies and their impact on the quality of teacher training, particularly the video clips that were developed and implemented.



**Figure 1: Screen capture of the Cyberprofs project**

### **Results (to be presented)**

In this presentation, we will describe the resource we developed (Cyberprofs project) and the main impacts on teachers-in-training. One finding of this development research project is that educational technologies, and particularly video clips, significantly complement the education of teachers who are studying at a distance from the university. Moreover, the interviews conducted with the candidates clearly underscore that freely and continuously accessible online video clips, presenting real-life classroom interactions and pedagogical activities, significantly increase teachers' feelings of competence. Furthermore, many other advantages are associated with the use of authentic videos accompanied by comments from experts, teachers and pupils.

## References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Fishman, B.J. (2004). Linking on-line video and curriculum to leverage community knowledge. In J. Brophy, *Using video in teacher education: Vol. 10* (201-234). Elsevier : Oxford, UK.
- Karsenti, T.; Thibert, G. & Villeneuve, S. (2003). *The role of self-efficacy beliefs in the adoption of pedagogical innovations by prospective teachers* (pp. 153-154). Proceedings from the European Association for Research on Learning and Instruction Conference – EARLI (Padua, Italy, August 26-30).
- Le Fevre, D.M. (2004). Designing for teacher learning: video-based curriculum design. In J. Brophy, *Using video in teacher education: Vol. 10* (235-258). Elsevier: Oxford, UK.
- Oonk, W., Goffree, F. & Verloop, N. (2004). For the enrichment of practical knowledge: good practice and useful theory for future primary teachers. In J. Brophy, *Using video in teacher education: Vol. 10* (131-168). Elsevier: Oxford, UK.
- Popper & Lipschitz (1993). *Putting leadership theory to work: A conceptual framework for theory based leadership development*. Leadership and Organization Development Journal, 14(7), 23-27.
- Reeves, T. (2000). *Enhancing the worth of instructional technology research through design experiments and other development strategies*. AERA Annual Meeting, pp. 1-15.
- Sherin, M. G. (2004). New perspectives on the role of video in teacher education. In J. Brophy, *Using video in teacher education: Vol. 10* (1-28). Elsevier: Oxford, UK.