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#### **Publisher's version / Version de l'  diteur:**

*E-Learn 2007 Proceedings, pp. 830-836, 2007*

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Fournier, H., Savoie, R., IsaBelle, C., Dalley, P., Desjardins, F.  
October 2007

\* published in the ELearn 2007 Conference Proceedings. Quebec,  
Quebec, Canada. October 2007. NRC 49860.

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# Implementation of the VeTIC Hypermedia System of Resources

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**Abstract:** This paper presents the inner workings of a web-based hypermedia system for cataloguing and distributing best practices related to ethno-linguistic vitalization (*elv* practices); a system put into place for school principals in the promotion of the French language and Francophone identity construction in Canada and available at <http://veltic.ca>. Specifically, techniques, issues, and solutions related to data entry and tagging, publishing, and production of hypermedia resources for online sharing and learning in a community of practice framework are reviewed.

## ICT and the development of a French linguistic and cultural identity

School principals in French-language minority schools must be aware of the need to develop new approaches and strategies: that is, because of new courses of study, increasing accountability, the use of Information and Communication Technologies (ICT) in schools, the ubiquitous presence of English-language media (especially American media), the high student dropout rate, the high rate of linguistic assimilation as well as the task of promoting French in a minority-language situation that is increasingly pluralistic. School principals are being called upon to play a more active role in responding to the challenges brought on by social change and minority status; while striving to guarantee a significant learning experience for French-speaking students. Given the significant role of the French-language school as an instrument for reproducing the social characteristics of the minority community, it is surprising that little is known about the types of practices that principals can effectively put into place to support the development of a French linguistic and cultural identity within the student body as well as within the professional staff. A fortiori, few studies address the ethno-linguistic vitalization (VEL, the French acronym) practices which would make it possible for principals to promote their leadership in this field and to optimize conditions for quality teaching and learning in French. Landry (1999) defines ethno-linguistic vitality as the result of social factors which ensure that the linguistic community remains active and distinct in its contacts with other linguistic groups. We have thus adopted the active form and consider ethno-linguistic vitality to be a process rather than a product. In the context of this study, ethno-linguistic vitalization practices are defined as all actions (of an individual or group) that contribute to the cultural vitality of French-speaking minority communities.

Given the increasing shift from French to English in language contact situations in Canada (Landry, Deveau, & Allard, 2006), it is imperative to offer specific examples of strategies which can be implemented by principals to promote the use of the French language. Following an analysis of questionnaire data on perceived knowledge and skills used to promote French and identity construction by principals in their school and community, interviews were conducted and practices collected, catalogued and published in a hypermedia system of resources, a system which encourages the exchange of *vel* practices among principals. An evaluation of the impact of the system on the principal's sense of personal and collective efficacy to promote the French language and participate in the construction of dynamic communities is planned in the next phase of the project.

The next section will highlight some of the issues being addressed in the French-language minority context of Canada, including the importance of the school as a context for cultural and linguistic reproduction, and the role of the principals.

## **Development of effective and creative practices**

In Canada, the knowledge and competences of school principals in promoting the French language are very important. Francophone teachers, parents as well as the Francophone community often turn to the school principal to respond to a multiplicity of needs. The leadership role played by the principal in supporting teachers and in facilitating student learning is well documented. Lapointe, Langlois and Godin (2005) and Hallinger (1999) demonstrated to what extent the leadership of the school principal can influence the atmosphere in the school and the classroom as well as in students' academic achievements. In a minority-language situation, principals have a particular mandate to ensure linguistic and cultural reproduction (Lapointe, 2002). For Bouchamma (2004), principals in minority contexts must also ensure ethno-linguistic vitality. The development of effective and creative practices by educational personnel is thus an essential condition for the survival and evolution of the French language in a minority-language context. A review of the literature reveals few studies that assess the competencies of principals in this area and few *elv* practices, let alone validated practices involving principals. One is left to ponder how principals can secure their role of cultural leadership in the community of French-speaking people when so little support is provided? Moreover, what strategies are available to help principals in French-language minority schools accomplish their leadership role?

Bandura, a social cognitivist, emphasized three types of interaction essential to human learning and development: cognitive, behavioral and contextual. According to Bandura (2003), the behaviors of an individual cannot be understood outside of a precise context. The concepts of self-efficacy and collective efficacy by Bandura (1977; 1996; 1997; 2003) reflect back to the interdependence of the two feelings. The perception of self-efficacy refers to the belief that an individual has in his or her capacity to achieve success in certain tasks, to face specific problems and to find solutions (Bandura, 2003). It does not constitute a measure of actual performance in the execution of tasks, nor the number of aptitudes which an individual possesses, but rather what the individual believes is their capacity to carry out tasks in various situations. Thus, for the same individual, his or her feeling of self-efficacy varies according to the domain. For example, a school principal may consider him or herself as being capable of managing student files and teaching staff, but have the impression of being less qualified in the promotion of French and identity construction.

An individual's perception of self-efficacy in a given task also has an effect on their perseverance and their motivation. For example, a principal who has a strong sense of self-efficacy in the execution of a task would show a higher level of engagement and motivation in the same task and would also be more inclined to ask for assistance as needed (Ryan, Gheen and Midgley, 1998 cited in Galand and Vandele, 2004). An individual's perception regarding their capacity to carry out the task is often as important as their actual competence.

According to Bandura's theory (1977), the perception of self-efficacy depends on various processes. A first process involves re-examining prior experiences for the existence of successes in the execution of similar tasks. If the individual is accustomed to successfully executing similar tasks, he or she has reason to believe in being successful once again. A second process consists of "vicarious" experiences; that is, having already observed individuals carrying out the same task successfully. For example, if a recent school principal observes more senior principals successfully engaging in activities that promote French and identity construction in tasks or trainings, he or she is more likely to be persuaded to believe that they can also succeed. A third source of self-efficacy comes from verbal reinforcements; the support, the compliments, the encouragements, for example, and the confidence expressed with respect to an individual by other significant people. A fourth refers to an emotional state in which the individual finds themselves during the execution of an activity. Obviously, when the individual experiences anxiety, this also decreases his or her feeling of efficacy.

Thus, to help the principals play an important part in the promotion of French and the identity construction, it becomes essential to lead them to become aware of their potential for action to encourage them to see themselves as agents of change and transformation (Freire, 1974), even taking on a transformational leadership role (Shields, 2003) within their school's team and within the community.

Bandura (2003) defines collective efficacy as “a belief shared by a group in its joint capacities to organize and carry out the actions necessary to produce a given level of achievements” (p. 708). According to Sinclair and Naud (2005) the diversity of solutions emerges from the sharing of expertise of the people who constitute the community. Throughout the writings of Sinclair and Naud (2007), it is clear that collective awakening can increase the sense of responsibility of a group and their resolve to engage in action. For example, certain principals in French-language minority schools, conscious of their mission in relation to their role in ensuring the promotion of French and identity construction among the youth, the teaching staff and the community, can agree to set in motion the sharing of their *elv* practices to help in the process. Thus, the principals’ beliefs regarding their efficacy in supporting each other mutually by sharing best *elv* practices can serve as the basis for the emergence of a feeling of collective efficacy and for attaining stronger outcomes in the promotion of French and identity construction.

## **Research goals and objectives**

The goal of this study consists of evaluating the feeling of personal and collective efficacy of francophone school principals in French-language minority contexts in the promotion of the French language and identity construction in their school and the promotion of ethno-linguistic vitality in their community.

In so doing, an evaluation of the knowledge and skills of francophone school principals in promoting the French language and identity construction in their school and in their community will be undertaken. Their feeling of collective efficacy will also be measured by way of their willingness to share their *elv* practices with other members of the community. Thereafter, *elv* practices will be collected from principals then catalogued and distributed in a hypermedia system of resources.

The research project includes three objectives:

- 1) To analyze the perception of principals of their knowledge and skills used to promote French and identity construction in their school and in their community, that is, in a French-language minority context;
- 2) To catalogue existing ethno-linguistic vitalization practices collected from principals;
- 3) To produce a hypermedia system of resources to make available innovative ethno-linguistic vitalization practices and to encourage exchange among principals.

## **Methodology**

### **Participants**

The first phase of the study was carried out with French-language principals and vice-principals in nine provinces in Canada (Quebec was excluded since French is not a minority language in that province) and the three Territories (Nunavut, Yukon and the North-West Territories).

### **Measurement instruments**

Two types of measurement instruments were used to evaluate competencies and to catalogue existing ethno-linguistic vitalization (*elv*) practices: a questionnaire and a semi-structured interview. Results from the first phase of the study indicated that the majority of principals agreed that gathering *elv* practices from principals in their province or other provinces would be useful. This finding provided support for continuing with the next phase of the project which involved collecting and distributing practices in a hypermedia system of resources.

The remainder of the paper will focus on describing the elements of the VeTIC hypermedia system of resources put into place to engage school principals in the construction of dynamic communities, and for promoting French language and identity construction in schools and in the community.

## VelTIC hypermedia system of resources

The VelTIC hypermedia system of resources is available at <http://veltic.ca> and includes all the important elements of a web site along with advanced search capabilities for added interaction with the content. The web-based system was written in PHP which is a general-purpose scripting language embedded into HTML. The system was created in PHP in order to generate dynamic web page content and is connected to a database which stores all the metadata about the practices (i.e. detailed descriptions of the resource) and associated media (e.g. audio, video, and other supporting documents).

### Database of *vel* practices

First, responses obtained in interviews with school principals were transcribed and edited for brevity and clarity to be entered into the database fields. Next, descriptions and information related to each practice were reviewed and validated by experts in language, identity, and education related fields. Currently, 141 practices have been entered into the database with the following identification and cataloguing information (76 of those practices are now online and the others are awaiting final approval from the principals/author of the practice).

*Identification* information associated with the author of the practice (i.e. the school principal) includes: first name, surname, province and school (with a hyperlink to their school). In addition, a short citation appears that captures the thoughts of the author (may be accompanied by a few seconds of audio in the principal's 'own words'). Finally, a photo of the school principal is also provided in the introductory information section.

*Cataloguing* information for each individual *vel* practice includes: title of the practice, category and a description of the practice (e.g., what is it? why is this practice useful? and examples of use) with associated media resources (e.g. audio, video, pictures or text-based files). More precisely, practices are assigned to one of seven categories: 1) practices which include the use of ICT, 2) community-based projects, 3) cultural productions, 4) exchanges with students from other schools-other provinces, 5) learning activities in the school and in the classroom, 6) practices which highlight local activities that are related to national or provincial events, or 7) the creation of new structures. Additional and complementary practices are listed under the media resources section. Information on these resources is made available once the resource is selected for viewing.

### Navigation

Users of the system can navigate the menu bar to find all the information on the VelTIC research project, including:

- welcome page (i.e. the *what* and *why* of the project);
- methods of contact or interaction (i.e. email for questions and comments, with coordinates for researchers and partners on the project);
- useful links, a glossary of concepts, background statistics on Canadian Francophone populations, and project related publications;
- information on training for participants;
- administrative functions (i.e. password protected database for entering *elv* practices).

Additional information and tools:

- important notices are posted directly on the site;
- a counter indicates the number of practices with the number of school principals currently available on the site;
- information on the site is dynamically updated;
- search tools are accessible on every page of the web site.



Figure 1: Welcome page in the hypermedia system

## Functionality

The hypermedia system of resources includes search functions that allow users to search the content of the *vel* database by:

- keyword(s)
- province
- school principal (first name and/or surname).

The system also provides an interactive search tool for live filtering of content in the *vel* database:

- results are updated and displayed as keywords are entered, and presented dynamically with every keystroke.

Practices are contextualized and hyperlinked:

- titles appear with a short description of the practice;
- identification information associated with the practice is displayed (i.e. name, school affiliation and hyperlink to their school);
- additional media resources are displayed and are accessible in one 'click';
- complementary practices are identified on the results page and link back to their source page.

The system will also integrate forums and chat tools in order to:

- create opportunities for principals to exchange with one another;
- ask questions and receive feedback on strategies;
- users;
- other minority-language communities.

## Next steps

The next and final step in the *VelTIC* project consists of evaluating the impact of the practices used by principals. This phase is crucial since it will allow us to determine not only whether the practices that were gathered and distributed were consulted but whether they were in fact implemented. Part of this final phase will evaluate whether or not the practices put into place actually support principals in taking on a more active leadership role in responding to the challenges brought on by social change and French-language minority status. This leadership entails creating optimal conditions for quality teaching and learning in French; with measures to guarantee a significant learning experience for all and success for French-speaking students in particular. It is also expected that principals will implement practices from other principals and will communicate with each other (given the communication tools offered in the system, such as forums and chat tools) to discuss the importance of promoting the French language in Canada. A fortiori, a certain professional learning community on the theme of *elv* practices may emerge with the help of the *VelTIC* hypermedia system of resources and communication tools. Moreover, we believe the *VelTIC* hypermedia system will serve as a model of shared practices and change processes that will be useful to all French minority-language school principals in Canada, as well as to people who work with other minority-language communities, whether they are English, the First nations people of Canada, Corsicans or Bretons in France, Basques, Catalans or Galicians of Spain, Ireland, or Scotland, just to mention a few.

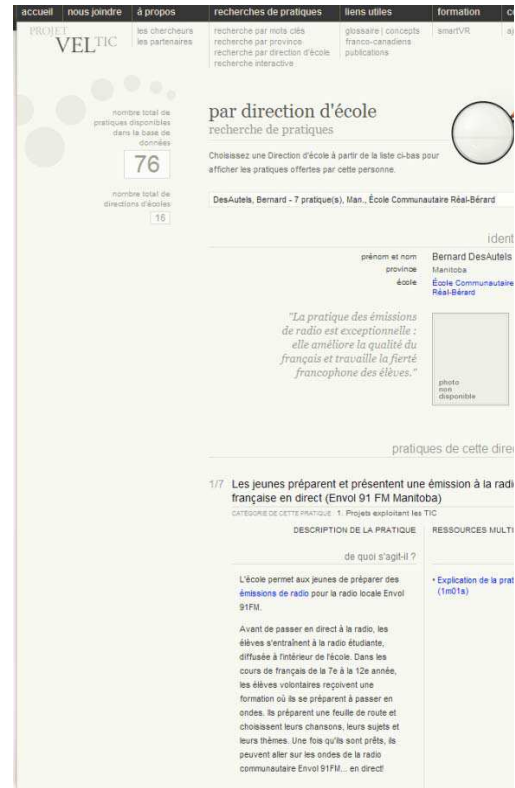


Figure 2: Display page for search results by principal

- create opportunities to obtain clarification,
- create a more dynamic community of
- create a model for change processes for

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