

## **SUMMARY - Discursive Psychology and Social Technology: Investigating Web 2.0 in Education**

This program brings new, social technologies together with a new social-psychological perspective in educational research. This program, therefore, has a dual emphasis on both technological and methodological innovation:

1. On new social software and related practices labeled “Web 2.0,” “the participatory Web” or “the read-write Web,” as they can be employed for educational purposes; and
2. On a recently-developed “discursive psychological” paradigm and its conceptualization of learning as occurring through conversational and relational practices.

Recent years have seen the rise of Internet technologies that are above all social and participatory, allowing children and adults to create and share their own content, and to communicate in a wide range of forums. Correspondingly, there has been great popular and expert interest in the potential of Web 2.0 communication technologies for education.

The discursive “spaces” presented by Web 2.0 differ from conventional face-to-face and online educational environments in that communication occurs in written form, and is *informal* and *abbreviated*. These new “conversational” communicative practices and technologies call for a new research approach: one that focuses on learning through text-based, informal communication. Such a research approach is provided by discursive psychology, a social psychological paradigm that emerged in the 1990s, and combines the insights of phenomenology, ethnomethodology and conversational analysis (Roth, 2008). This psychology and its theoretical precursors focus on “the action orientation of talk and writing” (Edwards, 1992, p. 2), as well as its relationship to “instruction and instructability” (Koschmann et al 2007, p. 134). Originally developed through the analysis of spoken communication, this approach provides radically new perspectives on both *what* and *how* people know as evidenced in everyday communication (Roth et al, 2008).

The present research program adapts these methods specifically to the study of textual communication, for the purpose of understanding and refining effective practices for learning in Web 2.0 contexts, thus addressing the following research objectives:

1. Developing a methodology for the study of learning in educational Web 2.0 contexts through the adaptation of the methods of conversation analysis and discursive psychology.
2. Through the application of this methodology, developing understandings of how learning occurs through the informal communicative and relational practices characteristic of Web 2.0.
3. By systematically applying these understandings, identifying and refining common practices for the educational use of these new technologies.

In addressing these objectives, the proposed research program leverages and extends the *applicant's* previous SSHRC-funded research in phenomenology and cyberspace (410-2004-0359), Web 2.0 object technologies (820-2004-1050) and online communication (7056-2005-0057). The program extends the *co-applicant's* research on learning in heterogeneous communities (410-99-0021), on formal and informal learning (501-03-0021), and on learning, identity, and emotion (410-06-0007). The proposed program of research thus presents the culmination Friesen's and Roth's research to-date, and directs their collaborative work to an area of urgent and growing importance in educational practice.

This research is based on a team approach: Friesen and Roth will jointly supervise doctoral researchers as a distributed team, joining together their respective research facilities through real-time Internet linkages. This work will occur in consultation with an “advisory team” of psychologists and educational technologists named as collaborators, who bring expertise in the methodologies and technologies central to the proposal. In this way, the program will bring together new developments and methods in psychology with the latest developments in educational technologies, producing and mobilizing interdisciplinary knowledge relevant to technology, communication and human learning.

## Objectives

The purpose of the proposed research program is to adapt a new social psychological paradigm (discursive psychology) and method (conversation analysis) to the study of new communicative contexts, practices and technologies (Web 2.0) popular in education. In so doing, this program will:

*Objective 1:* Develop methods for the study of learning in educational Web 2.0 contexts through the adaptation of the methodology of conversation analysis and discursive psychology.

*Objective 2:* Through the application of these adapted methods, develop understandings of how learning occurs through the informal communicative and relational practices characteristic of Web 2.0.

*Objective 3:* By systematically applying these understandings, identify and refine effective practices for the educational use of these new technologies.

## Context: Technological and Methodological

### *Technological Context: Web 2.0*

Over the past fifteen years, the educational application of Internet and Web technologies has developed and expanded significantly. A chronology of important developments would include the proliferation of Web-based course management systems in the late 1990's (e.g., WebCT, Moodle; see: WCET, 2008), the subsequent growth of blended learning technologies and approaches (e.g., Bonk et al, 2005), and simultaneous developments in e-learning standards, learning objects and open educational resources (e.g., Friesen & Roberts, 2005; OECD, 2007). Common to these developments is a consistent emphasis on formal, institutional functions and requirements for communication and learning. Most recently, however, the rapid proliferation of Web 2.0 applications such as blogs, wikis, and social networking sites has put the focus squarely on *informal* communications that can extend well beyond the boundaries of educational institutions (e.g., Downes, 2005; Freedman, 2008).

"Web 2.0" first came into prominence in 2004 to designate a "new generation" of software design patterns and business models developed specifically for the Internet (O'Reilly, 2005). Since that time, Web 2.0, or the "participatory" (Jenkins et al 2006) or "read-write" Web (Berners-Lee & Lawson, 2005), has come to be associated with a wide range of complementary technologies and activities. Among the most prominent of these are blogs, wikis, other social software, and XML technologies—which offer possibilities for increasing a user's agency for communication, self-expression and learning (Hall, 2008). *Blogs* and *blogging* emphasize personalization, dissemination and community building; *wikis* enable collaborative document development and management (as exemplified in *Wikipedia*); and services like *Facebook* and *Myspace* provide a range of communicative modes for the development of online communities (Brown, 2008). These new communicative technologies and forms are characterized by minute or micro-sized pieces of text or information (Friesen, 2007), socially-oriented interactions (Mason, 2008), and the development of myriad connections between and among users and resources (Siemens, 2005). They also make considerable use of XML and metadata innovations (O'Reilly, 2005).

These forms and practices are the subject of considerable interest in education (e.g., Alexander, 2006; Anderson, 2007; Brown, 2008). They are being integrated into technologies and activities in distance education (e.g., Xin & Feenberg, 2007; Moore, 2007), in blended learning (e.g., Friesen, 2008a) and in informal and lifelong learning contexts (e.g. Wilson et al 2006; Friesen & Hopkins, 2008). Enthusiasm for Web 2.0 in education has found expression in the invention of labels such as "connectivism" (Siemens, 2005; Solomon & Shrum, 2008), "microlearning" (Hug & Friesen, 2007) and "(e-)learning 2.0" (Downes 2005; Bartolomé, 2008).

Although practitioners and promoters both have greeted these approaches with keen interest, none of them has yet to be associated with a systematic research program. Additionally, research methods and effective practices suited to these environments have not yet been established (e.g., Moore 2007; Mason, 2008). It is precisely such research that this program will undertake, for the purpose of developing theoretical understandings and effective practices suited to learning in these online environments.

## *Methodological Context: Ethnomethodology and Conversation Analysis*

As the study of mental processes and human behaviour, psychology has been foundational for research in educational technology (e.g., Saettler, 2004; Friesen, 2009a), supplying three successive paradigms or learning theories: behaviourism, cognitivism, and constructivism (Ertmer & Newby, 1993; Schuh & Barab, 2007). The dominant paradigm in education and educational technology is currently a matter of considerable dispute, with some arguing for forms of situated cognition (e.g., Greeno, 2006), and others advancing “eclectic,” “synergistic” or explicitly pragmatist approaches (e.g., Bransford et al 2006; Fox, 2006; Robinson et al 2008, p. 38). With the field at this theoretical crossroads, and with new technologies gaining prominence, the proposed adaptation of a new discursive psychological paradigm to Web 2.0 contexts is both topical and timely.

This discursive psychological paradigm has its theoretical grounding in *ethnomethodology* and its methodological grounding in *conversation analysis*:

1. *Ethnomethodology* emphasizes the active, ongoing construction of everyday social sense and reality as an emergent phenomenon (Garfinkel, 1967). It supplies the *orientation* for discursive psychology, which is concerned with the emergence in everyday interaction of psychological phenomena like memory, belief, and intention. Of primary interest therefore are not the researcher’s preconceptions or categories, but those mobilized by participants. The concern of ethnomethodology “with sense-making” has been observed by educational technologists to make “it a natural framework for undertaking a study of instructional practice” (Koschmann et al., 2007, p. 134).
2. *Conversation analysis* involves the rigorous micro-level analysis of technologically-mediated communication, providing a *methodology* for discursive psychology. This methodology was originally developed through the study of conversations over the telephone (Hopper, 1992), and has subsequently been adapted to the analysis of video-recorded face-to-face interactions (e.g., Roth, 2004). It has only very recently and provisionally been expanded to include newer text-based Internet technologies (e.g., discussion postings and chats; see Hutchby, 2001; Antaki et al, 2005; Simpson, 2005), and its adaptation specifically to Web 2.0 communications is a central focus of the proposed research (see *Objective 1*, above).

Discursive psychology originally developed out the work of a number of closely interrelated theorists and researchers. Alfred Schütz and his student, Harold Garfinkel, began by applying phenomenology to social research (Garfinkel, 1967; Schütz, 1970), and gradually developed the field of ethnomethodology. In collaboration with Garfinkel, Harvey Sacks (1992) pioneered conversation analysis as a rigorous set of research techniques for ethnomethodology. Ethnomethodology and conversation analysis, finally, have been applied specifically to *psychological topics* (e.g. memory, belief) by the British “Loughborough School” of discursive psychologists (Edwards & Potter, 1992) and by American researchers such as Michael Lynch (Lynch, 2006).

While the approach proposed here is innovative, it builds on numerous investigations of collaborative online learning. This earlier research investigates processes of “critical inquiry” and logical “knowledge construction” occurring in text-based, threaded discussion forums (e.g., Bereiter, 2002; Garrison & Anderson, 2003). Empirical research on these formal processes of inquiry has consistently shown that the majority of student messages are “exploratory” or “social” in character (e.g., 75% in Garrison et al 2001; 72% in Fahy, 2005), rather than being “critical” or “logical” in nature (only 5 to 22% in Rourke & Kanuka’s 2007 review). Online student communications, in other words, do not reflect formalized inquiry nearly as frequently as they demonstrate *informal* communicative dynamics resembling those of Web 2.0. This raises the question, central to the proposed research, of how this personal and improvisatory interaction can be fruitfully understood in psychological and instructional terms. This corresponds to *Objective 2* of this research program: to understand how learning occurs through the informal discursive and relational practices characteristic of Web 2.0.