A dialogic understanding of the relationship between CSCL and teaching thinking skills

Rupert Wegerif

Received: 21 June 2005 / Revised: 18 November 2005 / Accepted: 12 December 2005 / Published online: 21 March 2006

Abstract How to teach flexible thinking and learning skills, particularly creativity and the skill of “learning to learn,” is a key concern for CSCL in the context of the emerging Networked Society. The currently dominant paradigms for supporting pedagogical design within CSCL, including socio-cultural theory, are limited in the support that they can offer to the project of teaching general thinking skills. This paper uses critical literature review, conceptual analysis, and evidence from case studies to argue for the value of a dialogic interpretative framework that links the goal of teaching thinking with the method of CSCL. The evidence reviewed suggests that dialogue is itself the primary thinking skill from which all others are derived. It is argued from this that dialogic theory offers a possible solution to the problem of how to conceptualize general thinking skills for CSCL: this is that teaching dialogue as an end in itself promotes the learning of general thinking skills. Implications of the proposed framework for pedagogical design are brought out through case studies illustrating the use of CSCL to broaden and deepen dialogic spaces of reflection.

Keywords Creativity · Dialogic · Learning to learn · Theory · Thinking skills

Introduction

Within the Computer-Supported Collaborative Learning (CSCL) research community there is considerable interest in teaching general thinking and learning skills. Often this interest is explicitly linked to the claim that new skills are needed as a result of a historical shift in work and life practices (e.g., Andriessen, Baker & Suthers, 2003; Bereiter, 2002). Castells surveys the many developments linked to the advent of
electronic networks and concludes that they amount to the emergence of a new form of global social organization, which he refers to as the “Networked Society.” He concludes that this historical transition “calls into question the entire education system developed during the industrial era” and demands that we develop a new pedagogy based around the idea of learning to learn (Castells, 2001, p. 278). In this paper I argue that although CSCL is the obvious pedagogic medium for the Networked Society, some of the underlying assumptions behind CSCL pedagogies are still very much a product of the industrial age and need to be challenged. Dialogic thinking, I argue, offers a particularly useful framework for education in suggesting the direction of dialogue as an end in itself, that is, the direction of becoming more able to dwell in the contradictory, multiple, and creative space of dialogue. CSCL is particularly suited to the induction of students into dialogue as an end in itself and, through this, to promote the skills of creativity and of learning to learn.

In the next three sections, I offer a brief account of the implications of dialogic thinking, contrasting this with currently dominant paradigms in CSCL, and I outline what is meant by the pedagogic aim of teaching thinking and how this relates to the use of technology. I then advance the main argument of the paper through four case studies.

Unpacking dialogic

The standard short definition of *dialogic* is that the meaning of an utterance is given by its location within a dialogue. It follows from this that to understand any utterance we have to look at the past utterances that it is responding to and the future utterances that it anticipates. Versions of this definition are widely repeated wherever the term dialogic is used in a technical sense, and seem to be accepted by researchers from a range of traditions. However, this simple claim has radical implications. Wertsch brings out the relationship between dialogic thinking and a critique of identity thinking when he writes, in a definition of dialogicality: “when a speaker produces an utterance at least two voices can be heard simultaneously” (Wertsch, 1991, p. 13). Bakhtin uses the term “inter-animation” or “inter-illumination” to indicate that the meaning of an utterance is not reducible to the intentions of the speaker or to the response of the addressee but emerges between these two (Holquist, 1981, pp. 429–430). The way in which each generation of scholars re-visits and re-interprets textual fragments from ancient Greece is used by Bakhtin to illustrate his claim that there can be no final or fixed interpretation of an utterance (Bakhtin, 1986, pp. 5, 170).

Wertsch combines Vygotsky’s account of cognition as mediated by tools with Bakhtin’s account of thinking mediated by “social voices” (Wertsch, 1991, 1998). However, Vygotsky draws his model of mediation from Marx’s account of the use of tools as mediated physical forces acting on objects in the world (Vygotsky, 1978, p. 54). As Bakhtin points out, relationships between things are very different from relationships between voices (Bakhtin, 1986, pp. 138, 162). For each participant in a dialogue the voice of the other is an outside perspective that includes them within it. The boundary between subjects is not therefore a demarcation line, or an external link between self and other, or a tool of any kind, but an inclusive “space” of dialogue within which self and other mutually construct and re-construct each other. Any sign taken to be a mediation between self and other, a word or a facial expression, must