Reviews / Comptes rendus

Collaborative Knowledge Creation: Practice, Tools, Concepts

Anne Moen, Anders I. Mørch, and Sami Paavola (Eds.)
Rotterdam, Netherlands: Sense Publishers, 2011, 272 pages

Conveying technically abstract concepts to nontechnical audiences is often a difficult task. It should avoid technical jargon and ensure transmission of meaning with brevity and clarity. Editors Anne Moen, Anders Mørch, and Sami Paavola were confronted with the difficult task of simplifying complex, esoteric technological concepts into simple but meaningful terms to a diverse audience base. They demonstrate an excellent understanding of the content of the articles included in their book and state their goal in the Introduction: to share knowledge that transforms "practices in higher education and in the workplaces" (p. 1).

The book is about an ecosystem of various tools, practices, and concepts involved in the process of collaboratively creating knowledge. Practitioners within this ecosystem coined the term *trialogical* to describe the interactivity between multiple objects, elements, and artifacts in the ecosystem, with the elements in the ecosystem "glued" together by communication and social interaction. The intent is to produce efficiencies through the creation of resources and practices that can be shared and stored for later use. Trialogy refers to a mediatory function performed by an epistemic agent to facilitate interaction between objects of the ecosystem. The term differs from the more familiar word, "dialogic," which refers to bidirectional interactions between objects. To elaborate on trialogy and its relationships with the elements (objects, artifacts, people, and processes), the various authors of the research, who are also practitioners, captured and represented the relationships on a computing platform of three well-integrated tools: the Knowledge Practices Environment (KPE), a graphical collective space for visualizing different knowledge elements and their relationships to each other; the Collaborative Semantic Model (CSM) used to create multiple representations of an idea or phenomenon through the application of modelling languages or algorithms; and the Multimedia Annotation (MA) tool used to annotate multimedia elements, and export, store, and share them for later reuse. This combined platform/trialogic principle forms the basis of the research practice captured in the chapters in this book.

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In Chapter 2, "Tacit Knowledge and Trialogical Learning: Towards a Conceptual Framework for Designing Innovative Tools," practitioners Hadj Batatia, Kai Hakkarainen, and Anders Mørch suggest that the platform and trialogic principles are similar to artificial intelligence principles, in that they facilitate knowledge creation in contexts where tacit and explicit participants engage in collaborative practices. Educators and practitioners who work in literacy-challenging settings might find utility in this suggestion. The platform is also useful for comparing different knowledge-creation processes. Through a process of abstraction, Martin Doerr, Athina Kritsotaki, Vassilis Christophides, and Dimitris Kotzinos argue in Chapter 3, "Reference Ontology for Knowledge Creation Processes," that the trialogic principles can be applied as a reference model for evaluating knowledge-creation processes and for determining a suitable process. I had to abstract from the chapters in order to determine the book's relevance to educators, to comprehend its big picture, and to understand concepts contained therein. I did this by reorganizing the chapters into meaningful but broad categories, each having a specific aim and objective. The first category of chapters, not necessarily presented sequentially, proposes trialogic principles as a framework for collaborative knowledge creation. The aim here is to advance the principles as a choice framework for practitioners considering knowledge creation in a collaborative setting, and to present the different components and elements of the process. The second category includes chapters that expand discussion on the different tools—KPE, CSM, and MA—and presented them as intuitive tools within a graphic-user interface. The aim here is to advance the tools as a both visually appealing and cognitively useful approach for capturing collaborative knowledge-creation practices. The third category describes several case studies where trialogic practices have been applied and the lessons learned from these instances.

One interesting case study was applied to assessing pedagogical practices in two higher education courses. Minna Lakkala, Liisa Ilomäki, Sami Paavola, Kaari Kosonen, and Hanni Muukkonen's chapter, "Using Trialogical Design Principles to Assess Pedagogical Practices in Two Higher Education Courses," came to the conclusion that trialogic principles in this context are an appropriate vehicle for change and innovation. Other applications can be found in medical simulation training, described by Klas Karlgren in Chapter 9; course development across multidisciplinary environments, described by Kosonen, Muukonen, Lakkala, and Paavola in Chapter 10; understanding human epistemic agency in the area of decision-making processes, described by Crina Damşa and Jerry Andriessen in Chapter 11; and examining the role of a mentor in a collaborative teacher-training context, described by Andrea Kárpáti and Helga Dorner in Chapter 12.

The authors conclude that trialogic concepts require more exploration and articulation. While drawing upon strong computer-learning techniques, concepts, approaches, and lingua, the discussion maintains its technical obscurity without delineating its meaning to real-life scenarios, even though the case studies help to ground it in realistic situations. Moen, Mørch, and Paavola achieve their goal but only to a technical few. Nontechnical practitioners may find it difficult to comprehend some of the discussions because terms like *objects*, *elements*, and *artifacts* hold meaning in computing that differ from daily practice. Nonetheless, it is a useful book to those who do understand it, in that it captures and documents the knowledge and practice of practitioners who use the KPE/CSM/MA platform. It provides ontological options for collaborative knowledge creation, allows comparison with other knowledge-creation processes, and offers portability and applicability to other areas of teaching, learning, and knowledge creation.

Ben Akoh, University of Manitoba