

Conceptualizations of Learning in ijCSCL

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Abstract: This paper presents an analysis of conceptualizations of learning in International Journal of Computer-Supported Collaborative Learning articles from a 5-year period and a comparison data set of articles in the same period from the Journal of Educational Psychology. Findings are interpreted through the lens of critical pedagogy. Findings reveal a conceptualization of learning in the educational psychology articles that is problematic in terms of supporting and reproducing systems of oppression but learning scientists who study computer-supported collaborative learning tend to use a conceptualization of learning that is agentic, empowering, and aligned with critical pedagogy.

Conceptual metaphors and conceptualizations of learning

This study used conceptual metaphor theory and critical theory lenses to understand conceptualizations of learning among computer-supported collaborative learning researchers. Conceptual metaphor theory suggests that the metaphors of learning we use dictate our practices in teaching and learning and influence what we value (Deignan, 2010; Lakoff & Johnson, 1999). Conceptualizations of learning are grounded in conceptual metaphors and related worldviews and paradigms (Gibbs, 2014). Critical theorists have argued that the dominant positivist *transfer/acquisition/banking* conceptualization of learning must be rejected and have characterized critical pedagogy through the *construction* conceptualization of learning (Apple, 2014; Freire, 1970; Giroux, 2013; Kincheloe, 2007). The construction conceptualization of learning has been used by educational researchers for over a century (see Dewey, 1897).

Methods

Conceptual metaphor analysis (Deignan, 2010) was used to characterize conceptualizations of learning, and axial coding (Corbin & Strauss, 2015) to analyze alignments between conceptual metaphors, practices, and worldviews. Conceptual metaphors are characterized by analyzing clusters of surface metaphors people use when discussing a particular concept (Gibbs, 2014). Seventy-eight articles in the International Journal of Computer-Supported Collaborative Learning (ijCSCL) and a comparison set of 211 articles in the Journal of Educational Psychology (JEP) from 2013 to 2017 were analyzed. Analysis of co-occurrence patterns was used to describe underlying conceptual metaphors. Co-occurrence patterns between conceptual metaphors of learning, practices, and worldviews were analyzed. Findings were then analyzed through critical metaphor analysis to identify and characterize conceptual metaphors and patterns in worldviews, paradigms, and practices through which systems of power are enacted and reproduced (Charteris-Black, 2004).

Findings

Seventy-eight percent of articles in JEP used the *transfer/acquisition* conceptualization of learning, and only 6.6% used the *construction* conceptualization. In contrast, 22.3% of articles in ijCSCL used the *transfer/acquisition* conceptualization, and 53.6% the *construction* conceptualization (Fig. 1).

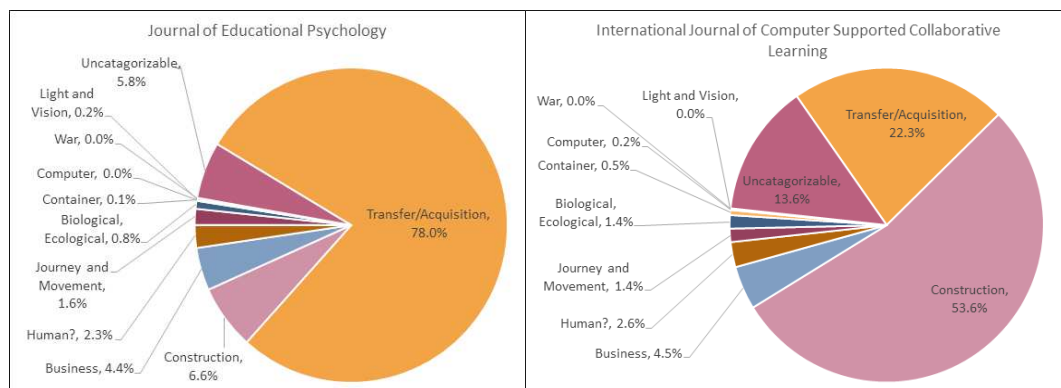


Figure 1. Conceptual metaphors in JEP and ijCSCL.

In JEP 37.1% assumed that learning is quantifiable, and 36.6% that test scores measure learning. None used situative or sociocultural perspectives. On the other hand, in ijCSCL 11.6% assumed that learning is quantifiable, and 10.5% that test scores measure learning. Over half (51.2%) used situative or sociocultural perspectives. Practices endorsed by JEP researchers included textbooks (14.8%), learning standards (13.3%), lectures (11.9%), workbooks (5.9%), and grades (5.2%). Practices endorsed by ijCSCL researchers included collaboration (22.3%), discussion (12.2%), reflection (12.2%), and identity development (4.3%). Across the entire data set (both JEP and ijCSCL) there were strong relationships between the *transfer/acquisition* conceptualization, a set of practices (testing, lecturing, textbooks), and a belief that the purpose of education is for career/workforce demand. There was a strong relationship between the *construction* conceptualization, a set of practices (discussion, projects, community, agency), and beliefs that the purpose of education is for social change, social justice, empowerment, or community engagement.

Critical theorists have asserted that the *transfer/acquisition* conceptualization of learning is dominant in society, and sees learning as the transfer of pieces of knowledge from teachers and books into the minds of learners who are then expected to be able to transfer the acquired knowledge to new contexts (Kincheloe, 2007). Hager and Hodkinson (2009) argued that although this is the dominant metaphor in society today, it is rarely recognized as such. The findings of this study suggested that this *transfer/acquisition* conceptual metaphor of learning is prominent among educational psychologists, and consists of a constellation of interrelated surface metaphors for knowledge, mind, learning, and education. These surface metaphors provide the structure for the underlying conceptual metaphor, which is then framed, reinforced, and filtered through particular worldviews and paradigms. CSCL researchers tend to have conceptualizations of learning grounded in a *construction* conceptual metaphor: meaning is individually, collaboratively, and collectively constructed.

Significance

Despite the long history of the *construction* conceptualization among educational researchers, the findings in this study indicate that within the domain of educational psychology the positivist *transfer/acquisition* conceptualization of learning remains dominant, and *construction* conceptualizations compatible with social justice, critical pedagogy, and empowerment work remain marginalized. On the other hand, among learning scientists who work with computer-supported collaborative learning the *construction* conceptualization of learning is dominant, but the *transfer/acquisition* conceptualization continues to be used and reproduced. This research provides strong empirical evidence supporting arguments by critical theorists suggesting that efforts toward changing conceptualizations of learning is not only crucial in our work in informal and formal learning contexts, but also in our work with students in learning sciences programs and in our work with fellow researchers. This conceptual change work for critical pedagogy will involve critical reflection and action regarding the metaphors we use, as well as practices in our designs for learning. Furthermore, this study suggests that the critical work of problematizing and changing worldviews and values may require problematization and perhaps even rejection of metaphors of learning, knowledge, mind, and education that perpetuate and reproduce oppressive conceptualizations of learning.

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