Reconceptualizing the Knowledge Hierarchy for Management Education

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ABSTRACT

Education is undergoing a crisis. Among the several remedial approaches proposed, this article contributes to the promotion of structured teaching for constructed knowing. One of the neglected areas of concern in the current education revolution is the structure of knowledge itself. The Data-Information-Knowledge (DIK) hierarchy was originally suggested to explain the differences between the three levels of knowledge; however, it does not capture them very well. Aiming at re-conceptualizing the DIK hierarchy from an up-to-date knowledge acquisition and management perspective, the authors start by making an argument for splitting each of the data and information levels into two. Instead of simply data, the authors propose the two levels of raw data and processed data. Likewise, they propose the two levels of potential information and actual information. Since knowledge expressions of other individuals constitute another source of potential information, they replace the three new levels of raw data, processed data and potential information with a single level, which they call the environment, and that embraces all means of acquiring information, whether through data collection and processing or potential information filtering. The authors thus propose a framework of knowledge acquisition based on an Environment-Information-Knowledge (EIK) hierarchy more indicative of actual teaching and learning processes.

Keywords: Constructed Knowing, Education Revolution, Information Levels, Knowledge Hierarchy

INTRODUCTION

At all levels, education in the U.S. is undergoing a crisis of form and substance. Not only is curricular content being questioned, the very structure of the personally staffed traditional classroom is being debated and modified by reductions in personnel and infusions of technology. The political 99and social media are replete with teacher and school-board criticisms. To cite an academic example, the recent book by Thomas, Lee, Thomas and Wilson (2014) discusses a range of future scenarios for management education and urges the field to reexamine...
its basic paradigm and, instead, develop new transformative and innovative models. Not even higher education is immune to the reexamination wave – there is even talk of faculty becoming redundant under some scenarios.

Colleges, according to Selingo (2013), are becoming more focused on branding and marketing than on what happens in the classroom. Majors now grow exponentially in response to a vocational emphasis: students (and their families) seek a credential for a job rather than a degree program that reflects educational content. The growth of online and for-profit education has triggered chain reactions in secondary and post-secondary institutions. From a faculty perspective, we observe “deteriorating [academic] standards, grade inflation, and… diminishing power in the classroom, where students increasingly are gaining the upper hand” (Selingo, 2013: 19). The consequences are significant: in their 2011 book Academically Adrift, Arum and Roska reported that 45 percent of students in their ground-breaking study made no gains in their writing, complex reasoning, or critical-thinking skills during their first two years of college; and two years later 36 percent failed to show any improvement. Even American business schools, which have for decades reigned supreme over the world’s top-flight hiring channels, have started to lose their luster according to a very recent study in the Financial Times (Collet & Vives, 2013). Against this background, a conceptual investigation of the structure of knowledge and the nature of knowing appears in order.

For a long time one’s survival relied on “knowing how” rather than “knowing that” according to the classic article by Dreyfus and Dreyfus (1986). This remains especially true today when the “leading edge of the economy… [is] based on knowledge and information production and dissemination” (Powell & Snellman, 2004: 199). The economic implications of an organization’s ability to generate and transmit knowledge are great, and thus continued attention to workers’ and managers’ knowledge and the role of learning is needed (Baldwin, Pierce, Joines, & Farouk, 2011). In this context, Chia and Holt (2008) argue for deemphasizing the traditional Western reliance on abstract symbolism and representations, at least in management education.

The principal recommendation of Chia and Holt is to anchor education in performative exemplifications. However, the real problem appears to be located in an almost opposite direction. We propose that it mostly resides in the chasm between the detachment from a theory of knowledge exhibited by instructors and the devotion to it they seek from their students. A constructivist approach to the philosophy of science in the sense of Scherer and Dowling (1995) and Mir and Watson (2000) requires that researchers – and teachers – become fully engaged as actors in their quest for knowledge acquisition and dissemination, rather than passive observers.

Can the chasm between the theory and practice of our understanding of the structure of knowledge itself be bridged in the teacher’s mind? Conceiving apt categories is an essential part of the communication process (Occasio, Loewenstein & Nigam, 2015). It should be recognized that the revolution in computerization and communication technologies, and the advent of the new discipline of Knowledge Management (KM) a couple of decades ago, have taken us away from the encompassing rigidity of the seminal contribution of Benjamin Bloom in the 1950s and further fueled discussion about the hierarchy of knowledge levels, as evidenced by Powell and Snellman (2004). Given the enthusiastic endorsement of KM by Rowley (2000), we will use its salient conceptual categories as an inspiration for an avenue for research and pedagogical progress that has been partly neglected.

So far, the contribution of the knowledge hierarchy for structured education seems to have garnered little attention. In today’s common educational practices, the terms data, information and knowledge are still too often used interchangeably, and “many people cannot tell the difference between information and knowledge” (Pagels, in O’Leary & Brasher, 1996: 262). Despite the theorists’ awareness of this deficiency within the student body and the public at large, there has been in the...
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