Using Cognitive Factions to Represent Shared Knowledge

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Abstract

When organizations face disruptive changes, creating a democratic strategic plan can be useful. Furthermore, uncovering and leveraging cognitive diversity has been shown to positively affect a strategic management team's performance. However, typical strategic plans only reflect the beliefs and values of the most powerful stakeholders. Consequently, cognitive diversity is minimized.

Using specialized Group Support Systems software, we uncover cognitive factions; subgroups of individuals with diverse views and beliefs. The group-driven causal mapping approach provides clarity in understanding the underlying belief structures of the cognitive factions through the use of givens-means-ends and causal path analysis of cognitive faction theme maps. Cognitive faction – driven analysis has been useful in both academic and corporate strategic planning settings and also in supporting student learning.

Biographical Sketch

David Tegarden is an Associate Professor in the Department of Accounting and Information Systems in the Pamplin College of Business. He also holds an appointment (by courtesy) in the Department of Computer Science in the College of Engineering. Dr. Tegarden received the BBA in Information Systems from Middle Tennessee State University in 1980; the MS in Accounting/Information Systems from Middle Tennessee State University in 1981; and the PhD in Information Systems from the University of Colorado in 1991. His minor area, in his PhD, was Computer Science where he specialized in Artificial Intelligence and Knowledge Representation.

His most recent research has been in the area of cognitive diversity, information visualization, ontology, and software engineering. His research has appeared in journals such as Decision Support Systems, Group Decision and Negotiation, IEEE Transactions in Visualization and Computer Graphics, International Journal of Human Computer Studies, Journal of Information Systems, Journal of Management Information Systems, Journal of Systems and Software, Journal of Software Maintenance and Evolution: Research and Practice, and Omega.