

Abstract:

Concept map (CM) is a theoretically sound yet easy to learn tool and can be effectively used to represent knowledge. Even though many disciplines have adopted CM as a teaching and learning tool to improve learning effectiveness, its application in IS curriculum is sparse. Meaningful learning happens when one iteratively integrates new concepts and propositions into her existing cognitive structure. It is the process of how one acquires deep and applicative knowledge in certain domains such as Information Systems (IS). As important as meaningful learning is in IS education, there is a scarcity of method to assess it effectively. This study reports a series of experiments of adopting CM as a tool to enhance and evaluate students' learning, especially meaningful learning in IS education. Based on theoretical foundation of CMs and prior related empirical work, we designed a series of assignments that require students to complete CMs in three participating courses. We also designed and implemented a tool to help analyzing the CMs with certain level of automation. The completed CMs are collected and analyzed to answer our research questions. We believe the results demonstrate the utility of CMs in IS education as an effective tool to understand and assess students' meaningful learning. Our work also experimented with various methods to use CMs and the findings provide valuable insights as to how CM-based teaching and learning tools can be integrated into IS curricula seamlessly.

Citation:

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