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Using Process Modeling to Enhance Teaching of Traditional and Emerging Organization Technologies in IS courses

TREO Talk Paper

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Business process modeling is a common element of information systems (IS) curriculum (Recker and Rosemann 2009). However, it tends to be covered in a rather limited manner (e.g., typically in the context of traditional IS technologies, such as ERP or e-commerce). In contrast, the IS curriculum is increasingly encompassing a multitude of new transformational technologies (e.g., artificial intelligence (AI), novel forms of social media), but typically no connection is drawn between these technologies and business process modeling.

We argue, the explosive growth of emergent technologies presents a ripe opportunity for a deeper integration of business process modeling into the IS curriculum, improving understanding of emerging challenges and offering a more holistic view of IS. First, the relentless automation of human activities creates a pressing problem of control and transparency over complex and often nebulous algorithms (e.g., deep learning neural networks). Individuals, organizations, and governments are struggling to make sense of the decisions used by these automated routines (e.g., consider European Union`s GDPR and "right to explanation" debate). To better understand the problem, the students can contrast models of traditional processes (e.g., in the context of ERP) vs those based on complex algorithms. The students can also learn the importance of good process documentation, especially when some of the tasks are performed by "black box" automated routines. Second, organizations increasingly need to understand how to best manage the human-machine interactions. To better appreciate the challenges, the students can study strategies for inserting autonomous agents (e.g., AI, robots) into business processes. Here, process modeling can aid in the understanding of the implications of the placement of autonomous agents within a process and its impact on actor roles and responsibilities. Finally, organizations increasingly seek to integrate traditional and the popular social media technologies (e.g., infusing social media, crowdsourcing into enterprise IT), and business process modeling can become a lens by which multiple seemingly disparate topics are brought together.

In short, business process modeling can prove a valuable tool beyond its traditional use and help students better appreciate a multitude of pressing social and organizational challenges, stimulate the development of innovative holistic solutions.

References

Recker, J., and Rosemann, M. 2009. "Teaching Business Process Modelling: Experiences and Recommendations," *Communications of the AIS* (25:1), pp. 379–394.