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Self-service Analytics Adoption: A Sociocultural Framework

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A Sociocultural Framework

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Research on Self-Service Analytics (SSA) is a growing trend that emphasizes pragmatic approaches to data access, data usage, and data value. Researchers examine different aspects of SSA *technologies*, from features to affordances, *use cases*, from strategic planning to day-to-day operation, *motivations*, from procedural mandates to psychological needs, and *governance*, from access management to training. Despite recent developments, current SSA adoption rate is still low. Therefore, it is necessary to understand what drives or hinders SSA use, especially in early stages when SSA platforms are first introduced to the employees. Low adoption rate has been attributed to many factors including limited training, lack of trust, generational differences, 'intransigence' or the resistance to change, and organizational culture. However, to the extent of our knowledge, there are a few studies that focus on SSA adoption from sociocultural perspective.

This study applied sociocultural lens to propose a framework and explains the SSA adoption process from an employee perspective. Our framework enhances understanding of SSA adoption, and in particular, how to convince, motivate, and train employees to enhance the adoption rate. Instead of focusing on success factors like prior studies, the proposed framework focuses on sociocultural attributes of work environments that slow SSA adoption rate.

We studied six BI tools (Tableau, Power BI, Qlik, SAS Analytics, Sisense, ThoughtSpot and RapidMiner) commonly used in implementing SSA. We surveyed their features and synthesized their affordances in three groups namely, knowledge co-creation, knowledge sharing, and knowledge management. These groups reflect the possibilities afforded by typical BI tools for implementing SSA within typical work environments. For each affordance groups, we identified the sociocultural factors hindering their adoption and continued use. As examples, we identified 'age' as a factor that hinders the actualization of knowledge-sharing affordances. Different generations vary in their approach to knowledge sharing due to differences in sociocultural values. Characteristics of heavy-work investment lead to different developmental experiences that shape employees' knowledge co-creation behavior. Work climate and organizational culture determine employees' data and values, especially for knowledge management. Other factors include hierarchy, power distance, autonomy, and individualism, among others. We recognize users' knowledge and capabilities that synergize with sociocultural factors which help explain SSA adoption rate.

Our framework presents a systematic approach to SSA design and implementation. We call for a shift in how SSA tools are selected by organizations and how these tools are introduced to the employees. The sociocultural lens allows the implementation of SSA while accounting for work climate, thus providing a valuable foundation for SSA training and support. By identifying how different knowledge mechanisms are enabled by different affordances, we offer a specific way forward to theorize how SSA can be leveraged in knowledge creation, sharing, and management.

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