

Agricultural Knowledge Management System Design, Use, and Consequence for Knowledge Sharing and Integration

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Abstract : This paper is investigated to understand the design, the use, and the consequence of Knowledge Management System (KMS) for knowledge systems sharing and integration. A KMS for knowledge systems sharing and integration is designed to meet the challenges raised by knowledge management researchers and practitioners: the technical, the human, and social factors. Agricultural KMS involves various members coming from different Communities of Practice (CoPs) who possess their own knowledge of multiple practices which need to be combined in the system development. However, the current development of the technology ignored the indigenous knowledge of the local communities, which is the key success factor for agriculture. This research employed the multi-methodological approach to KMS research in action research perspective which consists of four strategies: theory building, experimentation, observation, and system development. Using the KMS development practice of Ethiopian agricultural transformation agency as a case study, this research employed an interpretive analysis using primary qualitative data acquired through in-depth semi-structured interviews and participant observations. The Orlikowski's structuration model of technology has been used to understand the design, the use, and the consequence of the KMS. As a result, the research identified three basic components for the architecture of the shared KMS, namely, the people, the resources, and the implementation subsystems. The KMS were developed using web 2.0 tools to promote knowledge sharing and integration among diverse groups of users in a distributed environment. The use of a shared KMS allows users to access diverse knowledge from a number of users in different groups of participants, enhances the exchange of different forms of knowledge and experience, and creates high interaction and collaboration among participants. The consequences of a shared KMS on the social system includes, the elimination of hierarchical structure, enhance participation, collaboration, and negotiation among users from different CoPs having common interest, knowledge and skill development, integration of diverse knowledge resources, and the requirement of policy and guideline. The research contributes methodologically for the application of system development action research for understanding a conceptual framework for KMS development and use. The research have also theoretical contribution in extending structuration model of technology for the incorporation of variety of knowledge and practical implications to provide management understanding in developing strategies for the potential of web 2.0 tools for sharing and integration of indigenous knowledge.

Keywords : communities of practice, indigenous knowledge, participation, structuration model of technology, Web 2.0 tools

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