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PRELIMINARY RESULTS FROM A SOCIAL INTERACTIONIST EVALUATION OF A MEDICAL EXPERT SYSTEM

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Different models of change reflect different assumptions about information systems development, implementation, and research. These models inform the work of system development and implementation (Kaplan 1991). In one of these groups of models, Research, Development, and Diffusion (RDD) models, experts develop a system they consider beneficial, and users either adopt it or are considered resistant to it. In Problem Solving (PS) models, which derive from Lewin’s theories of group dynamics and change, experts and clients work together to develop information systems solutions to what they perceive as problems. In Social Interaction (SI) models, which are based on Rogers’s Classic Diffusion Theory, the emphasis is on how an innovation is communicated through social channels over time. New design methodologies and new evaluation approaches replace RDD models with PS or SI models. These models address social, cultural, political, or work life issues in system design and in system evaluation.

In this paper, we describe an evaluation research project concerning an expert system in psychiatric medicine. This system is one of relatively few systems to aid in medical decisions that is in routine use in a clinical setting. The evaluation uses an SI approach (Anderson, Aydin, and Kaplan 1995; Kaplan in press). It focuses on organizational and systems development concerns, including the participatory design practices that were used to help develop the system.

Preliminary results are based on observations and interviews with clinical staff. The data indicate a sense among clinicians of differences between clinical and administrative goals, and possibly also between goals and constraints of each of these groups and those of system developers. The administration’s support for participatory design and evaluation suggests a desire to get away from an RDD approach. Even though participatory design seems philosophically closer to PS models than to RDD models, preliminary findings indicate that participatory design may have been used in ways compatible with RDD assumptions of top-down expertise legitimating decision-making on behalf of users.

Despite the intentions of participatory design, there are difficulties in implementing approaches to fit design to practice and, thereby, to increase the likelihood of creating a useful system users want to use. These difficulties are related to ways in which the use of information technology reflects or shifts organizational power and control. It may not suffice to limit participatory design to the design stage. Continuing involvement may be helpful in order to keep the system in line with user concerns. Participatory design could be combined with formative evaluation as an on-going process before and after implementation so as to better achieve system goals.

Our analysis suggests that an SI perspective is helpful both for conducting an evaluation and in interpreting findings. An SI perspective also may be useful for system design and implementation. Further study is needed both to validate these interpretations and to assess the value of SI models for system design, implementation, and evaluation. As the study progresses, we hope to further investigate the efficacy of new design methodologies and evaluation approaches.

REFERENCES


