USING THE RATIONAL DECISION-MAKING MODEL TO SOLVE A COMPLEX PROBLEM: A LAPTOP INITIATIVE

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ABSTRACT

Ongoing innovations in computer technology present both opportunities and challenges to institutions of higher education. For instance, universities wrestle with the challenge of maintaining and improving information technology (IT) infrastructure in resource-constrained environments, while colleges and academic departments seek opportunities for enhancing pedagogy through technology improvements. In addition, because decisions to implement new technology can not be made in isolation, stakeholder involvement and agreement is critical. This paper details a specific instance when a cross-functional team applied the rational decision making model and involved stakeholders to overcome the challenges of changing technology and to improve pedagogy through computer technology.

CASE STUDY

An organization is often described as a "problem-facing and problem-solving phenomenon," where managers make decisions using information from "an environment which does not fully disclose the alternatives. . . or (their) consequences." [7]. Environmental dimensions such as complexity and dynamism are thought to create uncertainty that hinders individual decision-makers, who are bounded in their ability to rationally process all information and make optimal decisions [5]. The greater the complexity and dynamism of the environment the greater the demands placed on decision-makers [2]. As a result, organizations have begun to rely more heavily upon cross-functional teams to solve complex problems or capitalize on potential opportunities [1, 3]. In addition, many organizations have chosen to involve multiple stakeholders to create a collaborative decision-making process. The expectation is that involving stakeholders will lead to greater stakeholder commitment and thus, potentially more efficient implementation of any decision outcome [6].

In this paper we describe a specific instance when a cross-functional team, stakeholder involvement, and the rational decision making model [4] are used to solve a complex problem and to capitalize on a related opportunity. Specifically, the information technology (IT) office of a major U.S. university was facing a complex problem. The environment was becoming less munificent with respect to financial resources at a time when existing student computing equipment was becoming obsolete. In addition, students and faculty were expressing an interest in mobile computing and a desire to eliminate the place and time restrictions created by the computer lab structure and operations. Simultaneously, the College of Business and Economics at the university was exploring computer technology options to be incorporated into the design and construction of its new classroom building. Together, faculty representatives from the college, IT staff, and relevant stakeholders collaborated to solve a problem and explore an opportunity. As a result of this collaborative effort, a mandatory laptop program was implemented in the College of Business and Economics in which all incoming juniors admitted into the college were required to purchase a designated laptop..

We make two contributions in the following paper. One, we add to the extant literature on rational decision making by describing a specific application of the rational decision making model by a cross-functional team as it tries to solve a complex problem and capitalize on an opportunity. Two, we use our experience to offer advice to other universities facing a similar problem or opportunity, as well as those considering a mandatory laptop program.

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