Profit through Knowledge: The Application of Academic Research to Information Technology Organizations

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This paper examines the application of academic research to information technology (IT) organizations by examining the roles and behaviors of academic researchers and IT practitioners to determine areas of mutual opportunity. A practitioner Information-Gathering Model is developed to explore the manner in which IT professionals remain current on technological advances. This model subsequently is utilized to formulate specific recommendations to improve knowledge transfer.

The theme of this special edition of Information Resources Management Journal (IRMJ) is to explore and suggest methods to improve the relationship between the IT researcher and the practicing manager. One must presume that at the heart of this self examination is the underlying desire to either increase the practitioner’s perception of the value of the IT research or improve the relevancy of the research to the practitioner. Just as the quality of a product or service must be judged by the consumer of that product or service, the value of IT research must be valued by the intended consumer of the outcome — in this case, the practitioner. Thus, the purpose of this paper is to examine these relationships and to suggest methods for improvement from the practitioner’s perspective.

This self-evaluation opportunity afforded by IRMJ is very consistent with the principles of continuous process improvement. The ongoing application of this philosophy of continuous process improvement should therefore point the way to IT research excellence.

To explore and suggest methods to improve the relationship between the IT researcher and the practicing manager, the author synthesizes the essence of many in-person interviews. He draws upon both his many years of in-depth discussions with CIOs and their staffs concerning the application of academic research as well as interviews conducted recently to validate and enhance his earlier findings. These recent interviews included representation from such diverse industries as insurance, government services, financial services, transportation and information publishing at the most senior management levels.

What Is The Role Of The Senior IT Executive?

The only constant in the life of an executive is change itself. Yesterday’s standards and results are not acceptable in today’s operating environment! As markets become more global, opportunities are greater, expectations are higher and
the challenges facing IT executives are more significant than ever before. Organizational foundations laid today become the basis upon which to build for the future.

The primary responsibility of all executive management is to build for this future and insure the perpetuation of the organization through the creation of value. For the senior IT executive particularly, the creation of value must begin in the infrastructure that underlies an organization. This infrastructure is at the core of organization’s competency whether it produces a product or provides a service, and it manifests itself to the IT executive in the form of an architecture. Therefore, one of the principal operational roles of the IT senior management team is the creation of an architecture. The architecture is developed to provide a shared vision of the information systems environment required to meet the needs of the organization, and it is the structure of technology for doing business. As such, the architecture represents the organization’s coordinated response to the market place (i.e., the strategic direction).

The technology linkage between a company’s business strategy and its architecture is a very critical one. The senior IT management team actively participates and often orchestrates the development of an actionable business strategy. Such development is critical if the senior IT management team is to translate successfully the strategy into an appropriate and enduring architecture. The architecture is then achieved by acquiring and directing the technology and organizational resources to support the business strategic direction. The architecture results in an infrastructure upon which the business can grow.

**What Is the Role of the Academic Researcher?**

The primary role of the academic researcher is to create knowledge and initiate the transfer of this knowledge by promoting the understanding and the potential applications of this knowledge. The two components of this definition are critical. Knowledge created but not shared has no value. Similarly, knowledge that is flawed produces negative results in the hands of the practitioner.

What constitutes knowledge? The New World Dictionary (1974, 781) defines knowledge as “acquaintance or familiarity—the body of facts, principles, etc. accumulated.” Not unlike the physician who feeds patient clinical information back to the pharmaceutical companies for product contraindications and interactions, the academic researcher is recording responses from practitioners to create models that explain observed phenomenon. Both situations contribute to their respective knowledge bases.

For the academic researcher, transfer of knowledge tends to be accomplished by (1) publication in refereed journals that adhere to a specified level of rigor associated with the research methodology, (2) presentation at professional meetings, (3) publication in trade journals, or (4) action research (often consulting). Of course, this list is not exhaustive but only reflects the more common forums for knowledge transfer. Each of these forums has its own unique requirements and standards for academic participation. Additionally, contributions to each of these forums are often treated differently by the academic employers. The first two forums of knowledge transfer (particularly published research) generally drive academic success (promotion and tenure). Conversely, the latter two forums drive practitioner success. Thus the value structure of these four forums is reversed for the practitioner and the academic. Stated differently, often academic research stresses rigor over relevancy, while for the practitioner, who is primarily interested in solving a particular set of problems, relevance is most critical.

Publication in academic refereed journals or presentation at professional meetings that adhere to this specified level of rigor associated with the research methodology offer little opportunity for suggestion of constructive change based upon the understanding that this knowledge fosters. Instead, suggestions for future areas of research are encouraged. Indeed, when such suggestions are absent from an article, it is considered incomplete to the academic reviewer. Thus, rigorous research, while fulfilling all academic standards, merely drives the quest for knowledge rather than providing direction to the practitioner. It is the belief of this author that good research should do both.

**How Are These Roles Linked?**

What are the areas of overlap (commonalities) and underlap (gaps) in the roles of the practitioner and the academic researcher? Implicit in the primary definition of both roles is the desire to provide leadership to organizations on the effective management and utilization of information technologies. Leadership has been defined as “the process of creating an environment in which people become empowered.” (Weinberg, 1986, 12).

The IT practitioner provides organizational empowerment through the creation of an appropriate architecture or infrastructure that is adaptable and responsive to the ever changing market environment and thereby provides competitive advantage. The academic researcher attempts to create and transfer knowledge in order to empower decision-makers. Both the practitioner and the academic researcher are providing leadership through empowerment.

Through the acquisition and appropriate use of technology, the practitioner provides the leadership to develop an environment that is responsive to the market place and creates value. The academic researcher provides leadership by identifying new understanding along with the upsides, downsides, and unknowns concerning this new understanding. The balancing of these factors is left to the practitioner. This relationship is not unlike the physician who determines the best course of treatment for a patient based upon the pharmacological
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