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EXPLORING THE USER – IT PROFESSIONAL RELATIONSHIP

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ABSTRACT

Drawing on theoretical developments within the innovation literature, a conceptual model has been developed that draws a distinction between the adoption and assimilation of information technology (IT). The substantive conclusions are that a number of incongruences exist between IT professionals and end-users. These cover 1) the mismatch between business needs and the technology solution 2) inability of adoption processes to address issues of a social, organizational, or user nature 3) failure to recognize the importance of the process of interaction between various parties to technology assimilation. By addressing the assimilation process, the conceptual model offers a way to reframe our understanding from a user perspective.

KEYWORDS

User satisfaction; technology assimilation; service delivery

1. INTRODUCTION

It has long been argued that a gulf exists between the investment made in information technology and organizations' ability to reap significant business benefit from it (Hinton & Kaye, 1996; Coughlan et al 2005). Iyengar et al (2015) observe that "IT has become more powerful, relatively cheaper, and has spread throughout organizations at a rapid rate". Hand in hand with the dramatic increases in the availability of the technology is the rapid diffusion of IT applications within organizations, permeating all aspects of activity and reshaping business processes. This is undertaken in the belief it will lead to strategic competitive advantage (Pavlou & El Sawy, 2006). However, the ability to develop new technology would appear to have outstripped the ability to apply it to suitable business scenarios. The adoption of IT by organizations is seen to result from the rapidity of computer industry generated change. Change is stimulated by successive waves of manufacturer and vendor promoted technologies. Accordingly, business culture has become oriented towards finding the quick technological fix (Castells, 2011). For example, the development of CRM systems has been recognized as relying on 'technology push' (Batista et al, 2012) or technical hype with respect to cloud computing (Buyyaa et al, 2009). Consequently, the technical orientation of IT professionals has been highlighted in a number of studies (*most recently* Lyytinen & Newman, 2015; Bell, 2013). By neglecting to address the needs of the technology users, organizations are failing to realize the full potential of their IT resources. The need to understand the relationship between those using the technology and those responsible for supporting and administering it becomes more intense. This relationship is central to the transformation from technological innovation to business application, especially if significant improvements in business performance are to be realized.

2. RESEARCH DESIGN

The Empirical evidence is gathered within a multinational petro-chemicals organization. The first phase utilizes responses to a questionnaire developed using service delivery concepts; most notably the SERVQUAL framework (Parasuraman et al, 1991) and service co-production (Larsson & Bowen, 1989). The

purpose for conducting this survey is to understand better what issues computer users perceive to be important in the delivery and quality of the information systems and services which they use. This utilized the five dimensions identified by Parasuraman et al (1991):

Tangibles: *Physical facilities, equipment and appearance of personnel.*
Reliability: *Ability to perform the promised service dependably and accurately.*
Responsiveness: *Willingness to help customers and provide prompt service.*
Assurance: *Knowledge & courtesy of employees; their ability to inspire trust and confidence.*
Empathy: *Caring, individualized attention the firm provides its customers.*

This questionnaire is tested on a wide range of end-users, as well as IT support and technical staff. This identified, 1) significant heterogeneity within the user group, and 2) marked differences between users and the IT professionals. From this a model is derived that draws a distinction between the process of IT adoption and the process of IT assimilation. In the second phase, a set of follow-up interviews are undertaken that explore the adoption-assimilation model. Interviewees are selected from distinctive user clusters identified in the first phase. The clusters reflect differences in levels of discretionary usage, diversity of demand and disposition to participate, as well as skill and expertise and organizational position.

3. FINDINGS

What is apparent from the results of phase one is that, when asked to rank statements, users place most emphasis on groups B, reliability and competence, and C, responsiveness and access. Furthermore, the majority of users chose to place the tangible aspects (group A) of the service as least important. However, analysis of the aggregate scores for individual questions supports the credence which users give to the service aspects of reliability and competence, but does not show a clear emphasis on responsiveness and access. Instead, users place much greater importance on the statements which correspond to group D, the human interaction skills of support staff (empathy, communication and understanding). Again, the tangible aspects are the least important attributes of service quality and delivery. What is clear is that users do not perceive IT support services in terms of a single, technology focused perspective. It is apparent that a number of other considerations are perceived as being more important than the technology alone. This conflicts with the techno-centric approach adopted by IT professionals. They respond to externally driven change, rather than internally driven change, where organizational change is predominantly framed in terms of technical change alone.

The survey highlighted a variety of different user types and characteristics. Three distinct user clusters are identified, relating to differing usage patterns. The findings suggest that the demand for each service type relates to the stage of adoption and assimilation which a particular user has reached. The user clusters reflect differences in levels of discretionary usage, diversity of demand and disposition to participate, as well as skill and expertise and organizational position. Despite the various users' characteristics, described above, the uniformity of responses suggest that perceptions of service quality show a homogeneity for all users, regardless of organizational background and IT experience.

In phase two users broadly recognize adoption and assimilation as two distinct processes, however both processes are seen as interrelated. Negative influences on the adoption process relate to 'user involvement' (imposition of changes without regard for user needs) and the 'nature of change' (perception of change as technology push). What is interesting about the negative influences of the adoption process is that they do not appear to become detrimental until the assimilation process. IT professionals tend to see themselves as technology controllers, rather than service providers, concerned only with IT adoption. This fails to recognize that both 'adoption' and 'assimilation' are *processes*, both interacting and occurring simultaneously. Three constraints to the assimilation process were identified. These were concerned with the availability of IT, the availability of time, and a lack of knowledge and understanding of the technology to allow or improve its utilization.

4. CONCLUSION

The overall conclusions suggest that there is considerable incongruence between the delivery of IT services and the receipt of IT services. Furthermore, the perspectives which IT professionals and users bring to the process of IT adoption and assimilation are substantially different.

IT professionals have a tendency to perceive themselves as technology controllers, rather than service providers. Consequently, the approach taken by IT professionals to the adoption and assimilation of IT is predominantly from a technical perspective. By contrast, users perceive the IT support services from a number of different perspectives. In addition, it is the intangible considerations, which users perceived as being more important than the technology alone. So, the overall perspective which users hold draws on the amalgamation of a variety of different perceptions.

There is a strong tendency amongst IT professionals to perceive technical change as a linear process. More specifically, the process is viewed as uni-directional, with change perceived as technology driven. New IT developments are believed to occur as the product of computing industry activity. Accordingly, it is perceived that it is an IT department's responsibility or organizational role to react to such developments and to transfer them to the users. By contrast, users perceive technical change as arising from the interaction of users and IT professionals in response to a mixture of business needs, user needs and technology developments. Technical change emerges from a multi-directional interaction between IT professionals and users in an attempt to satisfy need.

IT professionals fail to attach any relevance to the different characteristics which exist between users. However, the users themselves acknowledge that different characteristics alter the nature of IT service receipt. IT professionals approach adoption and assimilation from a predominantly technical perspective and place far greater emphasis on the process of adoption, rather than assimilation. Once such a position has been adopted, any understanding of the influence user characteristics may have becomes minimal. Consequently, IT professionals perceive users as a homogenous group. The users, on the other hand place a greater importance on IT assimilation. From this position, users recognize that they require alternative types of service. Accordingly, there is a need for a responsive IT function which changes its approach to support depending on the recipient.

REFERENCES

Batista, L; Hinton, M; Dibb, S & Meadows, M (2012). Improving organisational responsiveness through CRM – strategy, system effectiveness and staff empowerment perspectives. In: 6th European Conference on Information Management and Evaluation (ECIME 2012), 13-14 September 2012, Cork, Ireland.

Bell, S (2013) Learning with Information Systems: Learning Cycles in Information Systems Development, Routledge (London)

Buyyaa, R, Yeoa, C, Venugopala, S, Broberga J, Brandicc, I. (2009) Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility, Future Generation Computer Systems, Vol 25, No. 6, pp 599–616

Castells, M (2011) The Rise of the Network Society, Wiley-Blackwell (London), 2nd edition.

Coughlan J., et al. 2005. *Understanding the business–IT relationship*, International J of Information Management, Vol.25, No. 4, pp 303–319

Hinton, M. and Kaye, R. 1996. *The hidden investment in information technology: the role of organizational context and system dependency*. International J of Information Management, Vol 16, No. 6, pp. 413–427.

Iyengar K, et al. 2015. *Information technology use as a learning mechanism: the impact of IT use on knowledge transfer effectiveness, absorptive capacity, and franchisee performance*. MIS Quarterly, Vol 39, No. 3, pp 615–641

Larsson R. & Bowen, D. 1989. *Organization and Customer: Managing Design and Coordination of Services*, Academy of Management Review, Vol 14, No. 2, 213-233

Lyytinen K. & Newman, M. (2015) A tale of two coalitions – marginalising the users while successfully implementing an enterprise resource planning system, Information Systems Journal, Vol 25, No. 2, pp 71–101,

Parasuraman, A. et al. 1991. *Refinement and Reassessment of the SERVQUAL: Scale*, Journal of Retailing, Vol 67, No. 4, pp 420-450

Pavlou, P. & El Sawy, O. 2006 *From IT Leveraging Competence to Competitive Advantage in Turbulent Environments: The Case of New Product Development*, Information Systems Research, Vol 7, No. 13, pp198 - 227