The Impact of Information Centers on End-User Computing

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This paper reports the findings of a study conducted to determine the end user’s perspective regarding the value of an Information Center (IC) in enhancing end-user computing (EUC). The study was conducted during 1987-1988 and included 158 end users from 67 companies. Approximately one-half of the subjects came from companies with ICs and one-half from companies without such a formal organization. A comparison between these two groups is made to ascertain the impact of the IC on the perceived penetration, decision-making effectiveness, and management support of EUC. This research supports the hypothesis that the existence of an IC has a positive impact on the assimilation and effective use of EUC for decision making in specific contexts. Relationships between the presence of an IC and the penetration of EUC in certain functional areas are found. The implications for other functional areas and suggestions for the future are presented.

Introduction
The term “end-user computing” (EUC) is one that has become pervasive in today’s information systems and computing literature. Mayo (1986) defines EUC as the “shifting of EDP resources and activities from EDP professionals/departments to users with minimal or limited EDP knowledge” (p. 24). The essence of EUC is that individuals work directly with computers to analyze data and enhance decisions rather than relying on EDP personnel to develop programs to perform the needed analysis. It has been observed that corporate management has become increasingly intolerant of waiting for organization-wide applications to be completed (Arnoudse & Ouellette, 1987).

EUC is viewed as a method for increasing personal productivity. Indeed, “end-user computing has penetrated deeply into the white-collar work place” (Arkush & Stanton, 1987, p. 66). Freiser (1987) foresees that by the end of 1990 virtually all white-collar workers will have
direct access to computers and that EUC power will exceed computing power of EDP departments by 3 to 1. According to Rockart and Flannery (1983), “interest in end-user computing is booming” (p. 776). This interest exists throughout all functional areas of the organization (Alavi, 1985).

The management of EUC has become an issue of concern to organizations that strive to be proactive in the dynamic information systems (IS) environment. In the Delphi study of IS management issues by Dickson and Wetherbe (1985), “Facilitation and Management of End-User Computing” was cited by IS executives as the second most important issue of the 1980s. The only issue rated more important was “IS Planning.” Freiser (1987) has called for senior management to “chart a course for end-user computing” (p. 4).

One approach to facilitate management of the rapid growth in EUC is the establishment of what have become known as Information Centers (ICs). Prudent corporate leaders have realized that guidance of the end-user boom has become an essential function of Information Centers (McNurlin, 1987). Most agree that the IC and its purpose must be distinct from traditional EDP services (Johnson, 1985). Information Centers have thus been developed primarily to support and manage end-user computing by helping users to gain confidence and competence in achieving goals through the use of computers (Arnoudse & Ouellette, 1987).

ICs vary in size and scope, primarily providing consulting, training, and assistance to users throughout the organization. The nature and sophistication of the support provided vary from firm to firm (Goldstein, 1987); however, the purpose of the IC is to improve the productive use of computers (Arnoudse & Ouellette, 1987?) so that business benefits are maximized (Sumner, 1985).

For the Information Center to have a strategic impact on the firm’s activity, it must be productive — matching IC strategy and goals with that of the organization (Oglesby, 1987). Critical success factors for ICs have been identified, including “facilitation of end-user computing,” “coordination of EUC,” and “quality of IC support” (Magal, Carr, & Watson, 1988).

Most of the literature has focused on the need, purpose, nature, and implementation of Information Centers. The impact and value of ICs have been mentioned in the literature and discussed in only a few papers, including Brancheau, Vogel and Wetherbe (1985), Sumner (1985), and Bergeron and Berube (1988).

Cook (1985) purports that ICs often have hidden costs and Mikita (1985) questions whether ICs have proven to be worth their expenses. According to Panko (1988), costs are usually much easier to discern than are benefits. So, subjective estimates of value must be used to accomplish a cost/benefit analysis. Results of the Bergeron and Berube study (1988) reveal that end users were more satisfied with their microcomputing activities when there was an information center to support end-user activity.

Perhaps the excitement of establishing and creating ICs has not subsided enough to determine if they do possess a real “value-added status” for their organizations and for the end-user effort. A study by Leitheiser and Wetherbe (1985) concluded that information centers are plagued with problems including political, service, and internal concerns. These problems diminish the value offered by the IC. The question of the significance of the value added by the IC is an important one.

The assessment of the impact that ICs may have on EUC and decision making is a valuable endeavor that may have implications for decision makers in their allocation of IS resources. Firms that do not elect to form such centers may be unwilling to divert resources from their traditional data processing or information systems budgets. Such firms are probably willing to allow end-user computing to grow within the organization in a natural, unmanaged fashion.

The future of ICs is also an important question. ICs, in their present organizational
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