CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND LIMITATIONS

Literature Summary

The inherent nature and competitiveness among business entities may force organizations to figure out methods for increasing competitiveness. Porter (1996, p.70) believed that organizations should focus on implementing and achieving "fit" for organizational effectiveness. With that, organizations are using IT methods and applications such as Customer Relationship Management (CRM), Knowledge Management (KM) and Decision Support Systems (DSS) to implement new opportunities, methods and processes for competitiveness. In light of this growing concern, the literature review found that organizations are getting better at implementing successful IT projects, however, IT projects are still failing because Project Managers (PM), Steering Committees (SC), and Project Teams (PT) escalate projects and still fail to involve users enough in the design of IT systems (Keil, Mann, & Arun, 2000, p.632). Keil et al. (2000, p. 639) also found that the "prospect theory, managers commit resources to a failing course of action because the decision is framed as a choice between losses which leads to risk seeking behavior," may explain why IT projects spiral out of control, exceed project budgets, are built with fewer features and functions than planned, and exceed planned project schedules." Consequently, users may fail to fully engage systems effectively for competitive advantage until they see the rewards or applicability to "enhanced effectives, productivity, and ability to perform their tasks quicker" (Davis, 1989, p.331). The basic premise for this research was, when users are involved in system design, organizations may be able to build systems that are useful, easy to use and consequently will be able to effectuate the principles for competition as promulgated by Porter (1996), and Grant's Resource Based View of strategic management (Segal-Horn, 1998).

Torzadeh & Wiedong (1992) found that Steering Committees and Project Teams were effective in leading technology programs, as evidenced in their ability to establish performance measures, and to build favorable inter-relationships between corporate goals, IT, managers, and users. These teams are predicated on the idea of early involvement. Like Davis (1989), Reich & Benbasat (2000) believed that incorporating organizational behavior and the social attributes in design early could relieve the tension between technologists and users. As well, According to Kwalek & Leonard (1996), in the literature review, the basic tenet of IT success is user involvement and user satisfaction with IT, establishing goals, coordinating and managing project schedules, managing financials, and managing project risks. Actually, one would expect the PT's or SC's to focus on user satisfaction and participation, such as user influence, and user developed communication given their ability to form, manage, and direct the project's efforts (Torkzadeh & Wiedong, 1992).

As related to this research, mistrust and collaboration are characterized by poor meeting facilitation, lack of user involvement and participation, and failure to build systems that are useful and easy to use. Further, technologists are not really stakeholders, and sit outside the liabilities for building systems not applicable to business requirements (McDonagh, 2001, ¶ 15). Technologists in most cases are mesmerized and distracted by bleeding edge technology and more interested in working on more elaborate projects (McDonagh, 2001, ¶ 16). Consequently, technologists may be focusing less on involving users, usefulness, ease of use, meeting effectiveness, establishing trust, and building collaborative efforts.

An important aspect of effective systems development is the social dynamics of design. Specifically related to this research is the ability of PTs and SCs to facilitate proper meeting effectiveness, and help technologists build systems that "improved their jobs, increase

productivity, enhance effectiveness, and allow quicker facilitation of tasks (Davis, 1989, p.331)." In practice, using OD techniques can help in implementing the processes and building the mechanisms for successful IT development (Castle & Sir, 2001, ¶ 4). Castle & Sir (2001, ¶ 4) analyzed the development and implementation of a " technology assimilation project, which included replacing e-mail, an office productivity suite, directory services, groupware, and internet-intranet architecture." With a "collaborative consulting method, " combining IT, its goals, and views of work with the organizational and behavioral skills of the organization, each business unit becoming a member in the stakeholder process (Castle & Sir, page,¶ 14). Interesting enough, the organization tied the success of the effort to performance appraisals and monetary awards, and created a "scorecard" for the entire evaluation process (Castle & Sir, 2001, ¶ 12). This is an example of a user involvement approach focusing on communication. It also highlights or identifies the methods for building usefulness and ease of use into system design.

The literature review noted that organizations are increasingly failing to build and deploy IT systems, which is partially due to the failures of SCs and PTs to involve users in the design process (McDonagh, 2001). The literature also supports usefulness, ease of use, as aspects of design (Davis, 1989). As well, it becomes evident that an OD design that allows improved and increased communication is essential (Castle & Sir, 2001, ¶ 26) for improved organizational capabilities.

Given the implications of not involving users in the design, ineffective meetings, and the significance of usefulness and ease of use as measures, the question becomes, are their perceived differences between users involved in design, users not involved in design, and members of the project team in terms of usefulness and ease of use? Also, are design meetings effective and user participation greater when users are involved? Accordingly, this research sought to answer these

questions and it reports these findings. Four (4) research questions addressed the problems in IT design and delivery processes. The premise offered here was, the bases of failed IT projects are system design efforts that do not involve users.

Discussion of the Major Findings

The survey was administered to one hundred and nineteen (119) evening college students at a college in Montgomery County, Maryland for the first unleveled group analysis. One hundred fourteen (114) were used to analyze the usefulness and ease of use variables. Eighty-four (84) surveys were used in the leveled group analysis for usefulness and ease of use assessments. Fifty-four (54) surveys were used in the analysis of meeting effectiveness and participation (the participating groups). The research in aggregate focused on one independent variable, involvement in system design, with three different levels: users involved in system design (UI), users not involved in system design (UNI), and members of the project team (MPT). The research focused on four dependent variables: usefulness, ease of use, meeting effectiveness, and participation in system design. Accordingly, several different analyses were performed. First, the research analyzed differences in perceptions of usefulness at the 95% confidence level, among UI, UNI, and MPT. Secondly, the research analyzed differences in perceptions of ease of use at the 95% confidence level, among UI, UNI, and MPT. Thirdly, the research analyzed differences in perceptions of meeting effectiveness at the 95% confidence level, between UI, and MPT. Fourth, the research analyzed differences in perceptions of participation system design at the 95% confidence level, between UI, and MPT.

Usefulness and Hypothesis Question 1

$H_0$1: There are no significant differences in perceptions of usefulness among users involved, users not involved, and users who are project members.

H_a1: There are significant differences in perceptions of usefulness among users involved, users not involved, and users who are project members.

The research findings for the construct usefulness revealed no significant differences between UNI, UI, and MPT.

There are several basic suppositions that may support these findings. First, according to Davis (1989, p.320) "users tend to use or not use systems to the extent that they believe it will help them perform their job better." Each group may have believed that the systems used in their analysis in fact helped them "improve their jobs" as promulgated by Davis (1989, p.331). Accordingly, there were not significant differences between the groups and involvement in design may not have changed their perceptions of usefulness. Second, Hong, Thong, Wong, & Tam (2002, p.115) found that "to attract more users to a system, designers must develop systems that provide useful content and valuable functions." The view here is that users may have believed systems possessed "relative content and functions" (Hong et al. 2002, p.115) that enabled them to "increase productivity and enhanced effectiveness" (Davis, 1989, p.331). Chau & Hu, (2002, p.214) believed that "attitude" was a significant factor in determining a users "intention" to use a system, which was based on the applicability of the technology with the content of their work. This premise is also aligned with Davis (1989, p.331) and the measures for this research question, "increased productivity, enhanced effectiveness, and improved job performance." In each case users might believe built systems met the contents requirements for effective work, and in fact systems were mechanisms for enhanced productivity. The

explanation for the findings may also be aligned with "expectancy-valence theory" which states that users are motivated when they expect that effort will result in good performance (Katzell & Thompson, 1990, p.145). Its applicability is perhaps users to work effectively, were motivated to use IT, and actually were able to perform successfully in their work (Goodhue & Thompson, 1995). Chau and Lai (2003, p. 137) further believed that usefulness is premised on "task familiarity or relative advantage, which is "the degree to which the innovation is perceived to be better than existing practices." Seyal, Rahman, & Rahim (2002, p. 79) validated Davis's (1989) premise that users adopt a technology primarily for usefulness when they found that "university professors more often use the Internet for gathering research material, teaching material, and performing teaching activities, versus keeping abreast of conferences, subscribing to scholarly user groups, and discovering interesting developments." All of these tasks can be seen as usefulness issues for professors. Davis (1989), Hong et al. (2002), Chau & Lai (2003) and Seyal et al. (2002) provide the support for usefulness as a factor in building systems users will in fact use and may explain why there were not differences in perceptions of usefulness between groups. However, user involvement as a method in design was not supported for the dependent variable usefulness. As well, there was support for these findings in that there were no significant differences in perceptions of participation between the involved groups UI and MPT (See Research Question 4).

Recommendations for Practice

In light of the findings, Chau & Hu (2002) found that perceived usefulness has a major influence on the adoption of technology. They recommend that managers and organizations demonstrate the efficacy of system usefulness prior to implementation by using information sessions, providing hands on training, and providing programs that demonstrate specific

improvements in usability and job effectiveness (Chau & Hu, 2002, p.221). Gill (1996, p.318) advocates using a "job design" view to create and calculate technology acceptance. Basically, Gill (1996) is advocating using motivation as a method for or criteria in system design, thereby resolving conflicts in utilization. Mahmood, Hall, & Swanberg (2001, p.125) also performed a meta-analysis of usage factors and recommend that organizations focus on " positive attitudes, IT maturity level, and strategic application influence," for increased utilization. These recommendations could be implemented when users are involved and facilitated by the SC or PT.

Davis (1989), Chau & Lai (2003), Chau & Hu (2002) and Mahmood et al. (2001) provide the support for usefulness as a method for increased utilization in system design. However, in line with the TAM (Chau, 1996), Davis (1989, p. 320) believes that "ease of use, defined as a user's perception of or belief that a particular system would be free of effort " is an additional factor that affects a user's adoption of IT." With this, a second question measured by this research was are their differences in perceptions of ease of use between users involved, users not involved, and members of the project team?

Ease of Use and Hypothesis Question 2

$H_0$2: There are no significant differences in perceptions of ease of use among users involved, users not involved, and users who are project members.

H_a2: There are no significant differences in perceptions of ease of use among users involved, users not involved, and users who are project members.

There were significant differences between users involved in design and members of the project team.

Users Involved in system design found systems less easy than members of the project team. There are several possible explanations for the findings to these questions. First, users involved may have found systems less easy to use because of "computer anxiety" (Venkatesh, 2000, p. 349). Venkatesh (2002, p.349) describes "computer anxiety as an individual's apprehension, or even fear when he/she is faced with the possibility of using computers." The basic idea here is that even when involved in design, this fear or apprehensiveness may be generated by the implementation and introduction to a new type of system. Second, users involved in design may have found systems less easy to use because of "the role of experience" (Venkatesh 2000, p.350). This concept is defined as " if an individual has acquired significant system specific knowledge and experience, their perceived ease of use of the target system will continue to draw from their general confidence in their computer related abilities" (Venkatesh, 2000, p. 350). Third, Venkatesh (2000, p. 358) "cites individuals are driven by their beliefs, even after significant direct experience, as long as the specific system fits with an individuals broad expectations and industry standard user interface conventions." In this case a users perception of ease of use or his attitude toward that system may affect his perceptions of ease of use when the systems used for analysis did not meet their expectations in the form of "task-technology fit" (Goodhue & Thompson, 1995, ¶ 2). This premise could be related to attitude theory in that "people who have favorable attitudes toward their jobs will be highly motivated to perform in their jobs" (Katzell & Thompson, 1990, p.145). As well, even though there was involvement in design systems, systems may not have been designed to meet their expectations of "clarity, understanding, performance, and learning ability" (Davis, 1989, p. 331). The work of Venkatesh (2000), and Davis (1989) are supported by Katzell & Thompson (1990, p. 145) in their promulgations of expectancy valence theory and attitude theory (work related attitude job

satisfaction)." As it pertains to this research perhaps users involved believed they had adequate work experience and exposure, yet, overall they were unsure about the system, the ability to navigate the system, and consequently were unable to perform to their expectations.

It may also be surprising that members of the project team found systems easier to use given their ability to focus more on the task and to dominate and control system design more. Given their higher scores on the effectiveness of the meetings measure, perhaps members of the project team believed that the design meetings were effective. However (as supported by the findings for Research Question 3), users involved believed that meetings were less effective than members of the project team, which could be attributed to the methods, effectiveness, or ability of the SC or PT to manage the design process. It appears that even though users were involved and participated (See Research Question 4), involvement by itself did not necessarily mean that the SC or PT was able to manage the methods for accurately capturing requirements and then facilitating the process that, in this case, would build systems that were in fact easy to use. Clearly, the effectiveness of the meeting measure suggests some differences between the user involved and members of the project team, and may explain why users believed that systems were less easy to use than members of the project team. With the significant differences found in meeting effectiveness (See Research Question 3) between users involved and members of the project team, one could surmise that in fact users were: unable to, did not articulate the business processes, nor captured the requirements necessary to build systems that are easy to use, and easy to implement. With the ineffectiveness of meetings, one also could expect faulty business analysis and inadequate system design. As well, organization's can expect to start projects prematurely, cancel projects unexpectedly, or implement projects that in fact are late and over budget.

Recommendations for Practice

This present research identifies three (3) potential opportunities to improve system design, and to minimize the differences in perceptions between users involved and members of the project team. The first recommendation is for SCs and PTs to design systems with the proper amount of complexity while insuring that the systems are not overly complex. The post meeting approach may offer this benefit. Ziefle (2002, p.303) studied the "usability and ease of use of three different mobile phones in terms of the complexity of menu structures and navigational keys." This research revealed, "phone complexity is a crucial factor for usability, and that phones built with complex interfaces created additional and misleading work for the user" (Ziefle, p.310).

Second, organizations should build systems that consider the task and technology fit. Kanter (2000) offered several suggestions for improving ease of use in computing systems. First, there is "relative advantage" (Kanter 2000, p. 75) when designer's focus on task and technology fit, as it relates to job performance, opportunities, and rewards. Kanter (2000, p.75) also talks about the "relative technical complexity or the technical sophistication that proper use of the application assumes in the end." Kanter (2000, p.75) further believes that the new and legacy systems should have common characteristics or like functionality. Even further, Venkatesh (2000, p.359) suggests, "organizations spend more time creating a favorable impact on system independent factors." These recommendations are premised on implementing system design methods when ease of use is a design requirement.

Third, organizations should also build systems that integrate the principles and methods of Castle & Sir (2001) who advocate using influence maps, disorder, and combining technical expertise with behavioral skills as an OD intervention. The methods used by Castle & Sir (2001)

may give organizations a chance to minimize some of the drawbacks to merely involving users in design and accurately manage design efforts for effectiveness.

Although Venkatesh (2000), Davis, (1989), and Kanter (2000) provide explanations for the differences in perceptions of ease of use, the fact remains that the users even when involved believed that systems were less easy to use than members of the project team. As noted earlier the impact of these findings may be the effectiveness of the design meetings. In light of this, this research asked the question are their differences in perceptions of meeting effectiveness between users involved and members of the project team? The next research question addressed that question.

Meeting Effectiveness and Hypothesis Question 3

$H_0$3: There are no significant differences in perceptions of meeting effectiveness between users involved in the design process and members of the project team.

H_a3: There are significant differences in perceptions of meeting effectiveness between users involved and members of the project team.

The overall analysis of meeting effectiveness revealed that members of the project team found meetings significantly more effective than users involved.

There are several plausible explanations and consequences pertaining to the perceived differences between users involved and members of the project team. First users and designers may have had different goals, views, and perspectives for the IT project because users involved were not fully engaged, did not work well with members of the project team or "there was not access to the information needed to make decisions" (Davison, 1997, p.168). Second, there could have been tension between designers and users because the "language in the meetings prevented participation, users involved had problems expressing themselves, and were reluctant to put forth

ideas" (Davison, 1997, p.168). Third, there may have been "mistrust between users and designers because of intimidation, pressure to conform, and the inability to offer opinions" (Davison, 1997, p.168). Fourth, members of the project team may have "inhibited users from participating in the discussion, and used status or power to influence design decisions" (Davison, 1997, p.168). This research offers several suggestions for meeting effectiveness that may mitigate "poor meeting management (efficiency), allow full and open communication, create a method for teamwork, and mitigate problems with intimidation, pressure to conform, and poor participation" (Davison, 1997, p.168).

Recommendations for Practice

Amoako-Gyampah & White (1997, ¶ 33) provide the key to meeting effectiveness when they support the soft side of IT systems development and implementation. This includes providing "status reports, trust, communication (understanding the language, iterations of dialogue, and meaningful discussion) and removing negative perceptions" (Amoako-Gyampah & White, 1997, ¶ 33).

Davison (1997, p.165) draws the relationship of meeting effectiveness to meeting outcomes, by promulgating that the attributes of meeting outcomes, "satisfaction, efficiency, ownership, and consensus are a function of the meeting process." Included is "willingness to criticize, participate, evaluate, and communicate" (Davison 1997, p.165).

One of the most important aspects in system design and project management is managing stakeholder (user) expectations (Castle & Sir, 2001). In formal PM work, expectations are managed by and with the project agreement, responsibility medium, and methods for communication (Verzuh, 2003). The basic idea is to provide a process of dialogue between groups. With this exchange of information each group is offered the chance to determine its

involvement in terms of resources. In reality, PMs, SCs, and PTs sometimes manage their projects with any method that will ultimately garner a kudo, reward, promotion, bonus, or new job assignment. This is supported by the work of Chang, Lin & Wu (2002, ¶ 18) who describes the power games designers use in IT design projects as "passing the buck, stalling, under-funding, or trying to kill a project."

Davis (2001, ¶ 22) provided the prescription for effective meetings by outlining a four (4) -step process for meeting effectiveness identified as "sensitivity of the issue, investigation, meeting time, and follow-up." In practice, meeting managers or facilitators should use the four-step method as a baseline for starting meetings versus a panacea for meeting effectiveness. Niederman, Beise, & Beranek (1996, p.2) discuss the importance of and responsibilities of meeting facilitators by identifying "facilitation" as a method for managing group decisions, coordinating action, and increasing discussion methods.

In practice, the facilitator should be trained in the methods promulgated by Niederman et al. (1996) such as "allowing full and open communication, managing conformance and pressure, and managing criticism" given the importance and consequences of improper facilitation (Davison, 1997, p.168). Drucker (2004, ¶ 18) believed that the organization's executives must make meetings productive. This starts with "deciding the type of meeting (announcement, reporting, informing, or presence), determining the format, executing, and terminating once the meeting goals have been met" (Drucker 2004, ¶ 32). The key to meeting effectiveness according to Drucker (2004, ¶ 39) is "meeting follow-up, whereby the meeting discussion is summarized, work assignments are outlined, deadlines are established, and confirmatory notes are sent to each member." In this case the meeting minutes are more than meetings summaries because they specifically outline tasks and responsibilities.

Zigurs & Buckland (1998, ¶ 25) identify Group Support Systems (GSS) as a method for "combining communication, process structuring, information processing, and accumulating and sharing data within a structural framework." GSS allows " analysis, input, feedback and group interaction" (Zigurs & Buckland, 1998, ¶ 25).

Further, Majchrzak, Malhorta, Stamps, & Lipnack (2004, p. 132) even recommend using virtual teams that "exploit diversity, use simulation technology, and create coherence between team members." According to Majchrzak et al. (2004, p.132), virtual teams may mitigate the behavioral obstacles of "meeting face to face", such as pressure to conform, reluctance to put forth ideas, and problems in expressing views and perspectives (Davison, 1997). Majchrzak et al. (2004, p.135) also found success with "simulation technology or virtual work places with online team rooms." These recommendations may be applicable in facilitating the OD intervention as promulgated by Castle & Sir (2001). The basic idea is merely involving users is not enough and meeting effectiveness is possibly the fulcrum for significantly involving users, insuring "communication, status effects, and efficiency in meetings" (Davison, 1997, p.163) and also the method for implementing a successful OD intervention as identified by Castle & Sir (2001). The recommendations made by Majchrzak et al. (2004), Davis (2001), Drucker (2004), Niderman et al. (1996), and Dean et al. (1998) all have a place as methods for managing meetings that actively involve users and allow organizations to develop systems for strategic advantage.

Given the importance in building and deploying IT, with meeting effectiveness as a critical factor, another question raised in this research is, are there differences in perceptions of system design participation between users involved in design and members of the project team? Are users actively engaged from their perspective, or is there evidence of some of the problems

cited in the literature, such as trade-off decision-making, a disdain for user input, and unilateral decisions about design?

Participation & Hypothesis Question 4

$H_0$4: There are no significant differences in the participation of system design between users who were involved in the design process and users who are project members.

H_a4: There are significant differences in the participation of system design between users who were involved in the design process and users who are project members.

This question was answered by measuring participation in design and determining if there were differences in perceptions (scale items 28-35) between users involved in design and members of the project team. User participation and user involvement was used interchangeably in this research.

There were no significant differences between users involved and members of the project team in participation. Some of the reasons for these findings may be users may have actively engaged in design and designers may have built concept systems, used focus groups, or surveys to obtain user perspectives (Dean et al.1998). Second, the members of the project team and users involved may have built systems and used formal communication processes such as project status meetings, broadcast emails, and newsletters to keep users informed (Dean et al.1998). Third, business unit managers may have supported the IT projects before business unit performance and success by emphasizing participation in these design meetings (Heintze & Bretschneider, 2000, p.826). Heintze & Bretschneider (2000, p.822), found when business unit performance increased as a result of IT, a manger's attitude and support for IT increases, but, only after project success. However, participation alone, as we found in the findings for Research Question 2 may not be adequate in performing the business and requirements analysis,

design, prototype and implementation required for building systems that are useful, easy to use, and that can be implemented for strategic "fit" (Porter 1996, p.70).

Recommendations for Practice

With respect to implementing a method for including users in participatory efforts, the first recommendation is that organizations should identify the roles, responsibilities (Damodaran, 1996) and type of organizational structures (Heintze & Bretschneider, 2000) that will support user participation. These recommendations are relative to this research and are derived from the literature pertaining to participation and system design. Damodaran (1996, p.372) identified the end user's role as taking ownership, validating that system functionality, providing relevant business analysis and speaking about facts, ideas, and opinions. Damodaran (1996, p.370) went on to describe the middle manager's role in development as providing users a chance to participate, to motivate, and to talk about the benefits and outcomes for the system. Lastly, Damordaran (1996, p.369) described the senior manager's role as promulgating the strategic significance of user participation in IT projects, developing inter-business work groups in an effort to share and understand objectives, and validating senior management's commitment to user involvement. Additionally, Castle & Sir (2001) recommend collaboration between business groups, knowledge gathering and sharing, and a messaging capability that permits dedication and responsibility. Hunton & Beeler (1997 ¶ 83) believe that user involvement should be supported by a sense of possession, value, and individual importance. The answers to user involvement may be in the recommendations provided by Davis (2001), Drucker, (2004), Niederman et al. (1998), Zigurs & Buckland (1998), and Majchrzak et al. (2004) in terms of meeting effectiveness and using electronic meeting methods. The basic premise is even though the literature finds

support for involvement in design, it appears that involvement alone is not enough to manage the path to effective system design.

Assumptions or Limitations

A limitation here was that the participants were not using the same system or type of system to answer the survey questions. Even though the instruments selected for this study have been found to be reliable and valid to different IT platforms (i.e. Executive Information Systems, Web Applications, Customer Relationship Management Systems, and Financial Management Systems) the participants were not using the same type of systems to answer their questions. A second limitation is self-reporting; participants reported their own views, and only their perceptions of the most recent or memorable IT projects or systems. The usefulness of self-reports have sometimes been questioned. Similarly, the participants may have reported their perceptions of systems currently in production versus systems in the design phase (early phase) of the life cycle. An additional concern is that there may not have been an adequate amount of participitants in each group. Clearly, this research should be extended to a larger population, thereby, increasing the opportunity to replicate some of the findings.

Given the significant differences in ease of use and meeting effectiveness found between MPT and UI, it would be prudent to analyze, ease of use, and meeting participation in specific industries, by specific technology applications and deployments, by specific design methods, and by specific gender, and by even by diverse groups. The goal may be to determine and identify other relationships between ease of use and meeting effectiveness and with usefulness and participation.

Summary

The purpose of this research was to determine if there were differences in perceptions of usefulness, ease of use, meeting effectiveness, and participation between users involved in the design processes, users not involved in design, and members of the project team. Accordingly analyses of variance was performed to determine if in fact there were significant differences in perceptions of usefulness, ease of use, meeting effectiveness and participation between users involved, users not involved, and members of the project team. The premise for this research was without user involvement, organizations may continue to implement IT that does not allow effective planning, implementation, and execution. Basically, and in line with Venkatesh (2000) ideas, organizations should pre-determine ease of use factors in the business analysis phase of design, given, ease of use is a determinant for motivating staff towards utilization and satisfaction. The research seems to support some of the ideas and participation may be a way for motivating staff towards utilization. Organizations may also establish the ease of use-satisfaction-utilization relationship by using focus groups, surveys, and prototypes products (Dean et al.1998). With successful IT implementations, organizations may also garner the support of senior and middle managers (Heintze & Bretscheneider, 2000, p.826). This research found significant differences in perceptions of ease of use between members of the project team and users involved in design. These findings may be attributed to "computer anxiety, role of experience, work and process fit" (Venkatesh, 2000, p. 349) and meeting in-effectiveness (Davison, 1997).

In addition to ease of use the research found significant differences in perceptions of meeting effectiveness between users involved in design and members of the project team. The research provided several probable explanations that include users did not have "access to the

information they needed," there was tension between the groups, the language disallowed proper discussions, and there was mistrust between both groups (Davison, 1997, p. 168). To resolve these problems the research recommends that organizations use meeting effectives as promulgated by Davis (2001) and Drucker (2004) and GSS and virtual meetings as recommended by Zigurs & Buckland (1998) and Majchrzak et al. (2004) respectively. With ease of use analyses, organizations may give themselves the best opportunity for matching system functionality, capturing accurate requirements, and delivering systems that will be used.

The importance of these findings is the TAM establishes ease of use (Davis et al. 1998) as a method for building systems users will in fact use and that organizations can use for implementing the strategic methods as promulgated by Grant and his "resourced base view" of strategic management (Segal-Horn, 1998, p.11). As well, the importance is in the relationship of meeting effectiveness to active user involvement. Without effective meetings and methods, SCs and PTs may not be able to analyze the business requirements, discover and deliver system functionality, and actually relate work tasks with technology.

The methods for involving users and system design are thought to be based on OB theories. This paper discussed ways to include the users in the design process to ensure their active participation in defining business processes, analyzing business requirements, capturing system requirements, and then building systems with "clarity, understanding, and flexibility" (Davis, 1989, p.331). OB theories such as the equity theory, attitude theory (Katzell & Thompson, p. 145), and theory of reasoned action (Chau, 1996) may help SCs and PTs understand and explain the importance of behavior in IT design thereby motivating users toward satisfaction and utilization. The implications for managers and organizations are given the current economic climate, with intense competition for smaller profit margins, and the need to

use IT to leverage the human, technical, and material resources of an organization, organizations must focus on ease of use issues and meeting effectiveness. This research seems to add to the work of Davis (1989) and Davis et al. (1989) who found the relationship between ease of use, satisfaction, and utilization. The research findings may have validated the importance of a process model that coordinates work between different business units (McDonagh (2001) and may have extended the work of McKeen & Guimaraes (1997) in terms of the efficacy of user involvement in systems design. This research identified formal OD interventions that may improve design capabilities which could link the strategic goals of the organizations with IT, and that build the IT infrastructure for effective competition. The present study has some limitations such as self-reporting and participants were not using the same type of system to answer questions. It is however, a beginning that opens up the discussion of what really takes place in such settings. The present study has raised some of the issues about how the work should perhaps occur in system design. As well, this study makes a good start on the road to a better understanding of system design and successful implementations.

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