

AMCIS Proceedings

AMCIS 2004 Proceedings

Association for Information Systems

Year 2004

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Systems Implementation

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ABSTRACT

Enterprise systems (ES) impose changes on users in many areas: job content, interpersonal relationships, decision-making approaches, and work status. Change management is critical to successful ES implementation. Top management support, business involvement, communication and training are important factors in managing these changes. However, such high level initiatives do not necessarily enable project managers to address specific reasons for resistance and to plan particular strategies to increase acceptance. By interviewing 12 project managers of more than 40 ES projects, this study tries to delve into the reasons for user resistance, to recognize related user behaviors and actions, and to identify effective strategies to manage these changes involving two types of major users of Enterprise Systems. It is hoped the result will give clear and detailed information on the types of user responses to change and their management.

Keywords

Enterprise systems, resistance to change, change management, user behaviors, managing resistance.

INTRODUCTION

Enterprise systems (ES) are a new type of information system. The packaged software imposes changes on users at different levels and in various areas. Change management, a key element of successful ES implementation has been considered in many studies (Davenport, 2000; Markus et al., 2000; Robey et al., 2002; Ross and Vitale, 2000; Sumner, 1999). Top management support, business involvement, communications, and training are important factors in managing the changes. However, these high level movements are difficult for project managers to address various user responses to multifaceted changes. Furthermore, user response to change can be reflected both implicitly and explicitly with destructive and non-destructive behaviors. Either type of response could affect the effectiveness of system implementation. Change managers, therefore, need to delve into the reasons for user resistance and to learn effective strategies for managing different states of changes. A complete model of user resistance would lead to better implementation strategies and desired implementation outcomes (Joshi, 1991).

Integrated ES software applies to two types of users: those that are responsible for operational activities and those responsible for managerial processes (Shang and Seddon, 2002). Operational activities are usually repeated periodically and involve acquiring and consuming resources, while business management activities involve allocation and control of the firm's resources, monitoring operations, and supporting strategic business decisions. Prior studies have indicated that users of different types of information systems such as transactional and decision support systems may perceive system usefulness differently and react to change differently (Dickson and Simmons, 1970; Jiang et al., 2000). With the use of ES, resistance differences may perhaps also be found with these two types of users. Research to date on change management has not addressed the difference between these two types of users in an integrated system.

User resistance was first recognized in the late 50s by researchers into human behaviors; reasons and behaviors of resistance were studied in the 70s by researchers into organizational management. Additional political and social status factors were included in the 80s and 90s. Meanwhile, similar resistance patterns were also found in general IS implementation. However, no research to date has provided a holistic and sequential view on user resistance with the two major types of system use.

This study will investigate the reasons for and responses of user resistance and propose appropriate strategies to manage these changes. Key questions to be asked are:

1. Why do different types of users resist change in enterprise systems?
2. How do different types of users resist change in enterprise systems?
3. How do different change management strategies apply for managing different types of user resistance with enterprise systems?

User resistance indicates a gap between change initiators and employees who try to maintain their status quo with undesirable behaviors toward change (Coch and French, 1948; Davison, 1994). Such undesirable behaviors of workers are a response to management-imposed changes in job and work methods (Piderit, 2000). Many researchers (Ginzberg, 1975; Jiang, 2000, Joshi, 1991; Keen, 1981; Kotter and Schlesinger, 1979; Markus, 1983) have identified reasons for user resistance. These reasons include loss of power, increased work, low tolerance, lack of trust and so forth. Similar circumstances can also be found with wide-scoped ES implementation. Many strategies have been suggested to manage user resistance; these strategies range from user participation, job redefinition, to some forceful actions. However, the most common mistake managers can make would be to follow only one approach or a limited set of strategies regardless of the situation.

In order to consolidate the existing knowledge about user resistance, three tables of possible reasons for resistance, related behaviors of resistance, and specific strategies for managing resistance have been built in this study. The process has started with a review of major papers on user resistance in key management and IS journals: Harvard Business Review and MISQ, and extended into important studies of change management. These lists are by no means comprehensive; other possible factors are to be explored. Applying Delphi techniques with in-depth interviews these tables will be refined, enriched with identified importance factors and synthesized with supporting data. The aims are to 1) identify and explain the major reasons for and behaviors of user resistance to ES operational and managerial processes, and to 2) to draw up appropriate strategies for managing these different resistance behaviors.

Reasons of Resistance	Contents
Parochial self-interest: resisting change to prevent losing something of value	Losing power and status Reduced scope for advancement or Job insecurity Loss of autonomy and control or specific skills
Misunderstanding and lack of trust: misconceptions about the implications and insufficient information of the benefits and gains	Misunderstanding the implementation of change Insufficient knowledge in using new systems
Different assessment: employees see more costs than benefits and those initiating the change see the reverse as true	Disagree that the benefits will come with the new system Systems can not provide real experience for decision making
Low tolerance for change: fear of not sufficiently developing the skills and behavior required	Fear of losing certain aspects of the current situation Role conflict and ambiguity within the organization Relationship altered Bringing higher skill levels to the job
Increased efforts: additional efforts or abilities needed for the job	More effort in performing tasks in view of increased monitoring Need to spend more time for work

Table 1: Reasons of Resistance

REASONS OF USER RESISTANCE

Reasons for user resistance to information systems have been widely explained by many researchers. Kotter and Schlesinger (Kotter and Schlesinger, 1979) consolidated the reasons people resist change into four major categories: parochial self-interest, misunderstanding and lack of trust, different assessment, and low tolerance for change. Several studies (Keen, 1981; Markus, 1983; Strebel, 1996) have enhanced these categories with further tested cases and tactics. On the basis of equity

theory, Joshi (Joshi, 1991)) added another category by explaining the increased efforts required by users that caused resistance. These reasons for resistance have been observed in various ES cases. Contents and descriptions of these reasons for resistance are summarized in Table 1.

USERS' RESISTANCE BEHAVIORS

Researchers have described users' response to change by several different types of behaviors (Hultman, 1979, 1995; Judson, 1991; Mathieu and Zajac, 1990; Odiorne, 1981). These behaviors usually cause lower productivity and affect the quality of service. Additionally, since ES implementation involves cooperation with consultants, problems may arise when consultants and clients clash (Kesner and Fowler, 1997); dissonance with consultants is a typical resistance behavior of ES implementation. We organize these resistance behaviors into three types: non-destructive, proactively-destructive, and passively-destructive and explained in Table 2.

Resistance type	Resistance Behaviors
Non-destructive: eliminate contact with the system	Request job transfer or withdrawal from the job Increased absenteeism or tardiness Communicating negative feelings to fellow coworkers
Proactively-destructive: direct damage to the new system processes	Deliberately sabotage work Process Making careless mistakes
Passively-destructive: Passively damage the new system processes	Refuse to cooperate with other employees Neglect work assignments Waste time and make little effort to improve work-related knowledge and skills Accept inferior quality performance Dissonance with consultants

Table 2: Resistance Behaviors

STRATEGIES FOR MANAGING USER RESISTANCE

Strategies for managing user resistance have been consolidated by (Jiang, et al., 2000) into two types: participative and directive. Kotter and Schlesinger (Kotter and Schlesinger, 1979) have also suggested two methods of managing change: to offer consultation to groups and conduct negotiation with employees and unions and to impose changes by threatening users with explicit and implicit coercion. Using a change management style model (Dunford, Dunphy and Stace, 1990; Dunphy and Stace, 1993) the strategies, described in Table 3, are organized into four types: participative, consultative, directive, and coercive.

RESEARCH METHODOLOGY

Taking the nature of ES-enabled change into consideration, we have reviewed existing studies on resistance and consolidated them into three sets of lists (Tables 1-3). The three sets of lists have five categories of reasons for resistance, three types of resistance behaviors, and four different styles of resistance management strategies that are suitable for ES-enabled changes. Sources of the contents of the three tables are listed in authors' web site.

Adapting the concept of the Delphi method (Lindstone and Turoff, 1975), the study will conduct in-depth interviews (Gordon, 2003) with 12 implementation project managers (PMs) with experience ranging from 3 to 10 ES projects per PM. Although first line users are another alternative for data collection individuals rarely express resistance attitudes without considering the potential negative consequences for themselves (Piderit, 2000). We have decided to select project managers as our experts for their holistic view of the entire change in system adoption and based on their accumulated experience and observations to verify and enhance our understanding of user resistance.

Before the actual data collection, three ES project managers will be consulted to validate and modify the questionnaire, which is based on Tables 1-3. Interviewees will be chosen to reflect implementation experiences in different industry sectors. Due to

the complexity of the data collected and some need for exploration in the data collection process as well as the fact that managers are often constantly moving around in their jobs, the interviews will be conducted in person first, and second and third round interviews will be conducted by telephone or e-mail to reassess points of interest.

Management Style	Strategies
<p>Directive: use of managerial authority to effect change</p>	<ul style="list-style-type: none"> Pace conversion to allow for reasonable readjustment period Document standards so new procedures are easy to learn and reference Retrain employees to be effective users of the new systems Reward ideas that will improve throughput Clarify job definition before the changeover Alter job titles to reflect increased responsibility Arrange for voluntary job transfers to avoid users with no interest in new procedures Call a hiring freeze until all displaced personnel are reassigned Give unions higher wage rates in return for a work rule change Give one of its leaders, or someone it respects a key role in the design, or implementation of a change
<p>Participative: widespread participation by employees on direction and process of change</p>	<ul style="list-style-type: none"> Involve employees in development of new systems to encourage a feeling of ownership Provide employees with information regarding system changes to preserve ownership Open lines of communication between employees and management Initiate morale boosting activities: company parties and newsletters to promote community
<p>Consultative: Provide employees with information and moral support</p>	<ul style="list-style-type: none"> Provide job counseling and organize group therapy to help employees adjust Listen and provide emotional support Conduct orientation sessions to prepare for change Be receptive to complaints following conversion to maintain employee contact and trust Provide one-on-one discussions
<p>Coercive: forcing or imposing change on key groups</p>	<ul style="list-style-type: none"> Implicitly and/or explicitly threaten loss of job and promotion possibilities, Fire or transfer people who resist change

Table 3: Strategies for Managing User Resistance

The data collection will be executed under the control of researchers. The statements in the six tables (Table 1-3 of two different types of users) will be rated by elicitation of a ranking on a Likert scale ranging from 1 (the factor is unimportant to ES-enabled change) to 5 (the factor is essential to ES-enabled change) according to their perceptions. Open questions will be asked to enhance the list, iterative verification will be done and detailed case descriptions will be requested to support the selected statements.

CONCLUSION

Enterprise systems are intertwined with business processes by which organizational activities and behaviors are deeply affected. Many companies have paid the price for ignoring transition difficulties in the rush to implement an enterprise system. This study strives to present research results with explanations for user resistance and descriptions of operative strategies. We expect that different types of users have different reasons for resistance, and behave in different ways towards ES implementation; thus strategies for managing resistance should be different as well. The value of the findings should be to

assist business managers in diagnosing resistance symptoms with a better understanding of their underlying causes. It is hoped that the study results will contribute to research into change management by building an integrated view of user resistance with important factors considered, whereas future research could be directed towards a closer understanding of the variations in reaction to changes of different stakeholders.

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