

Enterprise Resource Planning (ERP) System Implementation: A Case for User Participation

Rameshwar^{1*} Dr. Anoop Sharma²

¹ Research Scholar, Department of Computer Science, Singhania University, Pacheri Bari, Jhunjhunu

² Professor, Singhania University, Pacheri Bari, Jhunjhunu

Abstract – *The presentation of an information system, for example, Enterprise Resource Planning (ERP) system in an organization carries with it changes on how clients work. An ERP system cuts over the distinctive functional units of an organization and in this manner if not appropriately oversaw amid its usage may prompt obstruction from the clients. The various surges of research on ERP systems have predominantly been on ERP selection, achievement measurement, and basic achievement factors (CSFs). There is a lack of concentrates on client participation and the commitment of clients towards the effective execution of ERP systems. This paper audits writing on ERP usage with a point of structure a case for including users in this execution.*

Key Terms: Enterprise Resource Planning, ERP Systems, ERP Implementation, User Participation, CSFs.

1. INTRODUCTION

Information Systems (IS) are social systems which manage the collaboration of individuals and innovation. An information system, including an Enterprise Resource Planning (ERP) system, is client interfaced and intended to give information helpful to help procedure, operations, management examination, and basic leadership works in an organization. The usage of an ERP system influences clients at different dimensions of the organization since it cuts over every functional unit. These clients go from top management to low dimension clients who utilize the system on their everyday operations. Prior investigations on ERP systems that concentrated on basic achievement factors, for example, Al-Fawaz et al. [2]; Esteves et al. [12]; Zhang et al. [33], have distinguished client participation and contribution as one the significant factors for fruitful ERP usage. Client participation is characterized as the assignments, activities and practices that clients or their agents perform amid the systems advancement process (Barki and Hartwick, [7]). In light of financial resources required, the quantity of individuals engaged with the procedure of selection and the size of execution requested by ERP systems makes them the biggest systems that most organizations work with (Chang et al. [9]). Various investigations as of late led, among them Wah [29] and Xue et al. [31], report that some ERP system execution cases have had extensive troubles. These troubles have added to higher disappointment rates of ERP systems usage detailed

in certain investigations, (for example, Yehet al. [32]). Chang et al. [9] express that an enterprise resource planning system is another management innovation. Wu and Wang [30] express that it coordinates center corporate activities and different elements of the enterprise by joining best practices so as to encourage quick basic leadership, cost decrease, and more noteworthy managerial control. In light of this guarantee of combination and help on fast basic leadership, more organizations and foundations all inclusive are executing ERP systems (Markus et al. [19]). Alongside this selection, there has additionally been a more prominent valuation for the difficulties that emerge from actualizing these intricate technologies. As per Al-Mashari [4], ERP systems are a standout amongst the most creative advancements in information innovation (IT) of the 1990s. Al-Mashari further states that numerous organizations are currently embracing ERP systems making them the present most boundless IT arrangements. This overall reception is pegged on the focal points that ERP systems present which incorporate better information sharing inside the organization, improved planning and choice quality, smoother coordination between business units bringing about higher productivity, and snappier reaction time to client requests.

There are numerous in the information systems discipline who trust that client participation is fundamental for fruitful systems improvement. This conviction is neither grounded in principle nor

Rameshwar^{1*} Dr. Anoop Sharma²

substantiated by research information (Mattia and Weistroffer, [21]). This shows analysts have not tended to completely the hidden unpredictability of the idea of client participation. This is characteristic of an inadequacy in understanding client participation in information systems improvement as it happens in organizations. A brisk survey of writing tending to ERP systems execution uncovers that more center has been coordinated to progress or disappointment including CSFs, achievement measurement and assessment of ERP systems. There is a scarcity of concentrates on client participation and the commitment of clients towards the fruitful execution of ERP systems. This paper tries to manufacture a case for client participation in ERP systems appropriation and usage by exploring writing identifying with ERP systems. This paper is sorted out in 5 areas with the presentation being Section 1. Area 2 introduces a foundation on ERP usage, past research on ERP execution and client participation in ERP execution examines. Area 3 depicts the philosophy followed in recognizable proof, arrangement, gathering and surveying articles. An exchange on the looked into articles is given in Section 4. The paper finishes up with Sections 5.

2. BACKGROUND

Usage of an ERP system is an unpredictable IT-related social wonder with a huge assortment of learning (Sarker and Lee [24]). Amoako-Gyampah [6] declares that this execution includes huge expenditures, extensive periods, and organizational duty. There are a few hindrances which make the ERP systems usage a test. Among these deterrents that have been accounted for in writing incorporate technical issues and individuals impediments (Botta-Genoulaz and Millet [8]; Krasner [18]. Chang et al. [9] contend that numerous organizations are completely involved by technical issues in ERP system executions because of restricted resources and short due dates. They further express that since little consideration is paid to customization of ERP modules, this is probably going to make pressures, disappointment, shakiness and strife in the user group.

Because of the mind boggling nature of these systems, there have been reports of ERP execution projects that don't succeed. Sumner [27] states that there are various potential clarifications for these disappointments. The disappointments can extensively be delegated human/organizational reasons, for example, absence of solid and submitted initiative, technical reasons, for example, difficulties or troubles that emerge from software customization and testing and economic reasons, for example, absence of economic planning and defense). Sumner [27] further attests that as much as every one of these classes is significant there gives off an impression of being a developing accord among specialists that human factors are basic to the accomplishment of ERP projects. These human

factors incorporate the job that clients play during the time spent executing these systems. Indeed, even with this reality, few examinations have endeavored to inspect the job of these human factors and how they influence the ERP execution.

Past research on ERP system implementation

ERP system usage is and keeps on being a functioning region important to analysts. There are different surges of research that have been taken by scientists while investigating ERP system execution. A portion of these streams incorporate usage of ERP, ERP advancement, ERP software, ERP for production network management, contextual analyses, ERP achievement models, factor look into which includes recognizing the factors or variables that are basic for executing the ERP systems, process explore which centers around procedures that enable an organization to concentrate on the arrangement of activities that are related with the effective usage of ERP systems. Moon [22] recognized six research streams while directing an audit on writing. These streams are (1) implementation, (2) using ERP, (3) extension, (4) value, (5) trends, and (6) education. Table 1 introduces the major topical and sub-topical research zones inside the ERP area. The ERP usage subject is the principle focal point of this audit. Concentrates directed here concentrated on contextual investigations, basic achievement factors (CSFs), change management. centered stage in the usage procedure and social (national) issues that emerge while actualizing ERPs. Past ERP usage inquire about were factor-put together centering with respect to distinguishing the factors or variables viewed as basic in the effective execution of ERP systems. A portion of these examinations brought about distinguishing proof of basic achievement factors (CSFs) for fruitful ERP execution (Gibson et al. [16]). One of the CSFs distinguished by these examinations is satisfactory client inclusion and participation amid the usage stage (Upadhyay and Dan [28]). Client participation in the execution of ERP systems has been observed to be valuable since it prompts the assurance of system necessities from the clients and in this way making an uplifting attitude towards the ERP system. It is significant that clients are engaged with deciding the necessities of their functional unit.

Table 1: Thematic and Sub-thematic Research Areas within the ERP Domain

Theme	Sub-theme
Implementation	<ul style="list-style-type: none"> • General • Case Study • Critical Success Factors • Change Management • Focused stage in the implementation process

	<ul style="list-style-type: none"> • Cultural (national) issues
Using ERP	<ul style="list-style-type: none"> • General • Decision support • Focused function in ERP • Maintenance
Extension	
Value	
Trends and perspectives	<ul style="list-style-type: none"> • General • In a particular sector
Education	
Source: Moon [22]	

Inside ERP usage setting, CSFs are characterized as those factors that are important to guarantee a fruitful ERP venture (Gibson et al. [16]). A few examinations distinguished the basic factors expected to empower venture administrators and management sheets to improve their ERP execution projects. A portion of these CSFs are normal with other IT projects, for example, top management support, client's contribution and others are select for ERP systems such Business Process Re-building (BPR). Be that as it may, these examinations are hauled under conventional usage explore whose fundamental point was to research factors pertinent to IS execution achievement. A calculated model for ERP system usage proposed by Marnewick and 20 tends to four parts of usage to be specific people, product, procedure and execution (4P). In connection to ERP systems, People as the clients that spoke to the organizational prerequisites/attitude, Product as software modules that are to be actualized over the business, Process as speaking to the project's change management issues and Performance that is practically equivalent to information streams related with business process. Each 4P part has an immediate or roundabout impact on the ERP execution process. This incorporates the recognizable proof of organizational prerequisites, the customization of chose software, its installation and ensuing operationalization, lastly the significant needs of systems preparing for work force. In the ERP setting, people allude to users (both key-users and end users). Markus et al. [19] imply process hypothesis with regards to ERP execution. The procedure hypothesis separates the ERP usage into unmistakably characterized stages. These stages enable an organization to concentrate on the grouping of activities that are related with the successful execution of ERP systems. According to Markus et al. [19] there are different stages an ERP project advances through. The underlying stage is a contracting stage that tends to the basic leadership issues, for example, the need to buy system and prerequisites investigation that lead to financial endorsement of an ERP project. The following stage is a project stage, where system configuration, customization, information catch and transformation and rollout is led lastly the squeeze stage. The squeeze stage is a period wherein the system starts

to work and users associate with it in their everyday operations. Moreover, Markus et al. [19] will in general relate these usage stages with key activities and players to feature the level of coordination required for the successful execution of an ERP system.

There are various systems for executing ERP successfully distinguished in writing. These techniques can be arranged into organizational, technical, and people systems. Organizational systems center primarily around change management methods, project management, organizational structure and resources and how these would prompt successful ERP execution (for instance, Al-Mashari and Zairi [3]; Gable and Stewart [14]; Sarker and Sarker [23]). Technical methodologies address infrastructural issues like ERP installation, ERP intricacy, amleness of in-house technical skill, and time and cost of execution have been proposed as determinants of successful ERP usage (Al-Mashari and Zairi [3]; Amoako-Gyampah [5]; Sarker and Sarker [23]). Staff and management attitudes, client participation and association and their preparation are a portion of the people procedures that can be utilized in encouraging a successful usage of an ERP system (Amoako-Gyampah [5]; Gable and Stewart [14]). With respect to ERP systems success models, crafted by Gable et al. [15] and Ifinedo [17] are significant. Putting together their work with respect to the underlying work of DeLone and McLean [10][11], Gable et al. [15] built up a model for estimating the success of an enterprise system. In their model, Gable et al. [15] recognized system quality, information quality, fulfillment, individual effect and organizational effect as measurements or variables for estimating success of enterprise systems. The individual effect introduces an endeavor of perceiving the significance of users in the success of enterprise systems. Ifinedo [17] examined crafted by Gable et al. [15] and expanded it by including the Workgroup Impact measurement to the model. This measurement is worried about the effect of the system on the individual. These models endeavor to put the users in the image of ERP systems execution success. The models, through Individual Impact and Workgroup Impact measurements, show the significance of mulling over the users of the ERP system.

User Participation in ERP Implementation

As referenced before, client participation and inclusion are a piece of the CSFs for ERP systems. End users are the people who have direct contact with the ERP systems (Esteves et. al. [13]). Client participation alludes to association in the system development and usage process by delegates of the objective client gatherings. There are two primary regions of client participation when an organization or organization chooses to actualize

an ERP system (Esteves et. al. [13]). The primary region is the point at which a client participates in the phase of meaning of the organization's ERP system needs and the second territory is client participates in the execution of the ERP (Zhang et al. [33]). Understanding the commitments of client participation in ERP execution will prompt successful usage. One of the issues identified with ERP usage is the contradiction of procedure highlights with organization information needs (Siriluck [25]). To address this issue users should be permitted to take an interest in the execution of the ERP system since they know about the business forms and the learning area in their functional units. Including users in the phase of characterizing organizational necessities furnishes the users with an opportunity to form and shape the system dependent on their needs and business prerequisites and along these lines control the result (Esteves et al. [13]). At the point when users are included or take an interest in these stages they will undoubtedly respond decidedly to the capability of ERP system.

3. METHODOLOGY

The Methodology utilized in this examination intensely centered around ERP usage writing talking about client participation and inclusion. Watchwords that were utilized in searching for proper writing were ERP, ERP execution, ERP CSFs, client participation, client contribution. The inference of these watchwords framed the main phase of the system. The second stage included directing a search on journal articles, conference papers, books and web postings dependent on the catchphrases recognized. An assortment of instruments were utilized to search for these papers, as pursues: web search engines, for example, Google researcher, and a progression of journal databases; ScienceDirect, IEEE, Emerald and Inspec. The displayed articles were then sorted into various gatherings which included ERP success models, ERP appropriation, ERP usage, User participation issues, critical success factors (CSFs), change management, ERP inside reconciliation and execution challenges by and large. The short-recorded papers from the arrangement practice shaped the premise of the writing survey.

4. DISCUSSION

The focal point of this paper is on client participation with regards to ERP systems execution. Past research on ERP execution has concentrated on ERP reception, success measurement, usage techniques and success factors. There is a deficiency of research similarly as client participation in ERP system usage is concerned. The nearest endeavor in perceiving the job of users in the successful execution of ERP systems is in the recognizable proof of critical success factors (CSFs) where client participation and association is referenced as one of the CSFs. Survey of writing directed by Moon [22] and Addo-Tenkorang and Helo

[1] notice that a standout amongst the most referred to critical success factors in the execution of ERP systems is client participation and association. In any case, this is just displayed in type of client education and preparing so as to completely utilize the actualized system. These investigations don't contend in support of the commitments that client participation makes towards a successful usage of an ERP system. Most examinations have concentrated on participation of users in conventional information handling conditions, for example, participation in the development of exchange preparing systems and management information systems. These investigations, nonetheless, have recognized the requirement for research into client participation in different kinds of systems and in an assortment of conditions.

ERP systems cut over the whole enterprise regarding functionality and utilization. They are profoundly mind boggling and require an alternate usage approach. Most examinations on ERP execution have broken down the usage from the organizational or industry point of view. There has been little research center in ERP system reception at the individual or client level.

End users interface with the system on an everyday premise. Client participation alludes to participation in the system development and usage process by agents of the objective client gatherings or end users themselves. There are two regions in which users would partake when an organization actualizes an ERP system specifically the period of recognizable proof and meaning of prerequisites for the ERP system, and client participates in the execution of the ERP systems (Zhang et al. [33]).

Including users in the phase of characterizing organizational information system needs has a few positive focuses. Because of the idea of their work, users will in general create space aptitude in their functional zones consequently altogether understanding organizational requirements and they can be engaged with characterizing these necessities. This makes it workable for them to tweak the system dependent on their needs and business prerequisites and more opportunities to control the result. Participation of users exhibits an opportunity for users to respond decidedly to the potential ERP system.

Client participation in ERP systems usage is unique in relation to that of customary information handling and management information systems. This is on the grounds that the execution of an ERP system requires customization of the different modules which thusly will influence how the users collaborate with the system. Users take an interest so as to improve the functionality of the modules. Participation encourages users to give better

information on prerequisites, defeat opposition and approve plan alternatives.

Participation is additionally observed as a method for improving comprehension among users and system developers henceforth empowering users have their contribution to the progressions to their workplace. Actualizing an ERP system gets changes to the manner in which people work inside the organization. Most organizations actualize ERP systems that have been bought from software vendors. These sort of ERP systems require customization amid reception. Procedures will change and there might be work cuts and defense of responsibilities inside departments because of the customization. All these will bring out obstruction from the employees and this must be overseen viably previously, amid and after the usage of the ERP bundle. ERP systems contrast from in-house or custom development systems in various ways. One of the ways originates from the way that ERP systems are viewed as based on best business practices and in this way the client might be required to make changes to business procedures and methods so as to completely use the system. The ERP system may should be customized to coordinate the business procedure that the client knows about. After the successful usage the client normally winds up subject to the ERP merchant for help and updates (Somers and Nelson [26]; Wu and Wang [30]). The successful execution or reception of technology by an organization must consider the human and management issues. Users of these technologies, for example, information systems/technology, are at the focal of these executions and selection. It is consequently critical to enable these users to take an interest in the execution procedure. Client participation has customarily been perceived as a critical segment in Information System/Technology execution.

5. CONCLUSION

The presentation of another information system, for example, an ERP system will change the manner in which people work. The stage is new, new and various interfaces, data section is changed and report designs are extraordinary. Users frequently discover these progressions pointless and consequently decline to acknowledge them. One of the approaches to address and diminish the effect of these progressions is to support client participation in the usage of ERP systems.

In this paper, we have looked into past ERP research with a point of structure a motivation for client participation in ERP system usage. As expressed before, the past research has concentrated on ERP reception, success measurement, success factors among other technical parts of ERP usage. An information system, including an ERP system, is client interfaced and intended to give information preparing capacity to help the technique, operations, management investigation, and basic leadership

works in an organization. The client is at the focal point of an information system.

ERP executions are costly and complex endeavors, yet once they are successfully actualized, noteworthy upgrades can be accomplished, for example, simpler access to dependable information, end of repetitive data and operations, decrease of process durations, expanded productivity consequently diminishing costs (Zhang et al. [33]).

The execution of an ERP system varies from that of any conventional information system because of its coordinated nature which causes sensational changes on work process, organizational structure and in transit people carry out their responsibilities; Most ERP systems are not fabricated but rather received and in this way they include a blend of business process re-engineering (BPR) and bundle customization; and ERP usage isn't only a technical exercise however it is a socio-technical test as it presents new arrangement of management methodology.

In that sense, it has turned out to be certain that ERP execution contrasts from conventional systems development where the key center has moved from an overwhelming accentuation on technical investigation and programming towards business process structure and human components (Gibson [16]). Not at all like most home-development heritage systems that were intended to fit individual working show, ERP systems give best practices, as it were conventional procedures and capacities at their beginning.

Arrangement of the standard ERP forms with the organization's business procedure has been considered as a significant advance in the ERP execution process (Botta-Genoulaz et al. [8]). Executing a bundled ERP system unavoidably changes the manner in which people work. Successful execution of an ERP system requires participation among various parties and departments. All in all, we might want to repeat the way that ERP usage is an unpredictable IT-related social marvel. A generous number of ERP usage fizzle with various potential clarifications for these disappointments displayed. These disappointments, as per writing, may comprehensively be delegated human/organizational, technical, and economic. While each of these is significant, there seems, by all accounts, to be a developing accord among researchers those human factors, more than technical or economic, are critical to the success of ERP projects.

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Corresponding Author

Rameshwar*

Research Scholar, Department of Computer Science, Singhania University, Pacheri Bari, Jhunjhunu