

The Chang Management Strategies and Processes for Successful ERP Implementation: A Case Study of MADAR

Hala M. Al-Shamlan¹, Abdullah S. Al-Mudimigh²

¹Department of Information Technology

²Department of Information Systems

College of Computer & Information Sciences

King Saud University

Abstract

Top management usually faces an unexpected attitude from potential users during implementing an enterprise resource planning (ERP) system. For one reason or another, they resist the implementation process and may cause the failure of ERP system. Therefore, top management should be deal with this problem using effective change management strategies and processes. In this paper, we discuss the successful change management strategies and processes in literature. A case study of MADAR has been presented to discover the strategies and processes used for the successful enterprise system.

KeyWords:- *Chang Management, ERP system, change management strategies, change management processes, MADAR.*

1. Introduction

Organizations are continually facing with the need to change their structures, objectives, processes, and technologies. Thus, they must be able to make changes to sustain their competitive advantage. Many have adopted enterprise resource planning (ERP) systems to help do this. Studies have reported that ERP adoption is about 80% in fortune 500 companies [7]. The enterprise resource planning (ERP) system is an integrated set of programs and process for all kind of data and information that provides support for core organizational activities such as manufacturing and logistics, finance and accounting, sales and marketing, and human resources [1, 2, 10]. An ERP system helps the different parts of the organization share data and knowledge, reduce costs, and improve management of business processes.

However, successful ERP project implementation is not easy nor an inexpensive or risk-free venture task [5, 8, 9]. Implementing an ERP system package causes vast change that needs to be managed carefully to get the full advantages [5]. Also, ERP implementations have been plagued with high failure rates and inability to realize promised benefits. The failure rate has been estimated as 60–90%. Some prior studies indicated that a major reason for failure was the resistance of the user to change [1, 2, 5, 7, 8, 9, 18].

Al-Mashari and Al-Mudimigh in [18], describes a case study of a failed implementation of SAP R/3 to re-engineer the business processes of a major manufacturer. They point out that the change management is one of the main factors

that led to failure in ERP implementation. Moreover, the authors in [5] describe the main causes of failures in many ERP implementation is the lack of focus on ‘the soft issues’, i.e. the business process and change management and they point out that almost half of ERP projects fail to achieve expected benefits because managers underestimate the efforts involved in change management. ERP systems are often associated with fundamental change to organizational processes that involve different stakeholders [7]. Therefore, though ERP systems could be implemented successfully from a technical perspective, success may depend on employees being willing to use the delivered system.

In fact, many cases of the failure to implement ERP because of either cancellations or cost/time over runs have been reported [10]. The effective implementation of an ERP system requires change management strategies and an understanding of organizational culture. Change management involves the effective balancing of forces in favor of a change over forces of resistance [1, 10]. There are many important processes and tools in change management. The previous studies present different techniques and strategies have been used in change management also the authors in those previous studies used different processes, methods, and tools to change organization without any resistance and make the employee accept the new ERP system.

The purpose of this research paper is investigating the effective and more useful change management strategies, and what are the more useful and significant processes and tools for change management to implement successful ERP system. After we discuss the strategies and processes presented in previous studies, we take successful enterprise system (MADAR) as a case study and we explore the strategies and processes has been used in this system, and we measure the impact of change management in employees.

The rest of this paper organized as follow, In Section 2, we define the change management to get more understanding in this term. In section 3, we discuss the strategies has been used in change management. In section 4, we present the important processes and effective tools in

ERP change management. In section 5, the MADAR case study is presented. In last section we give our research conclusion.

2. Defining Chang Management

In this section we illustrate the meaning of change management term especially in ERP implementation because it is very important to understand what is change management in ERP implementation before we discuss the strategies, processes, and tools has been used for change management.

Change management is a primary concern of many organizations involved in ERP project implementation [1,5,10]. The authors in [5] identify change management, in terms of adopting an ERP system, as activities, processes, and methodologies that support employee understanding and organizational shifts during the implementation of ERP systems and reengineering initiatives. Moreover, Change management is a process that helps the management for the implementation of appropriate planned change for the development of the organization [2]. The authors in [14] point out that the change management refers to all activities associated with the interaction of technology, processes, and people. Project team and end-user training, the understanding of new processes, communications, and job redesign are some of the main activities that comprise a change management strategy.

However, the existing organizational structure and processes found in most companies are not compatible with ERP systems structure, tools, and types of information. Even the most flexible ERP system imposes its own logic on a company strategy, organization, and culture. Thus, implementing an ERP system may force the reengineering of key business processes and/or developing new business processes to support the organizations goals [9]. Also, ERP implementation requires a massive change in an organization's structure and affects the way people use to do work and interact. Therefore, it is important that an organization goes through a carefully planned transformation that is based on adequate strategy and well-defined methodology and processes of implementation [19]. The resulting changes may significantly affect organizational structures, policies, processes, and employees. Therefore, the authors in [6] see that the Change management can be considered as a special case of risk management. On the other hand, as we mention before change management has been recognized as a planned process of change in an organization and is feeble for a smooth transition from the current status to a developed status. Actually, There are two area of change management that is depending on the organizational purpose. These are Incremental/Continuous change and Transformational or Major Change. Incremental/Continuous Change is an

integral process to a particularized ongoing change management process. It basically concentrates over the functionalities of planning, followed by supervising and the process of budgeting. Transformational change on the other hand has various kinds of conventional change management proceedings and is little far from the upgrade version of the implementing it in modern structure [2]. In general, the transformational change is more risky than incremental change and it is needed more experience in change management strategies and processes.

Generally, the main challenge of ERP implementations is to manage the elements of change in the organization so that the intended, desired changes are implemented successfully and the unintended surprises that could lead to failures are avoided. ERP systems impose their own logic on organizations and this may be a source of cultural conflicts [1, 4, 9]. Cultural changes are probably the most difficult kinds of changes to identify and manage because culture is something quite difficult to grasp [1, 4, 8, 17]. In a company, its culture often reflects the implicit beliefs, assumptions and values about what behaviors are believed to lead to success and as tacit, they are hard to identify and change. [4].

In addition, the basic problems of change management as identified by [2] are related to the adoption of new strategies in an older format of work culture, need for professional leadership, acceptance to the original implemented strategies and above all to have the right attitude to accept the new proceedings. However, employees who are old to traditional kind of management usually cannot accept the ERP formulation and thus can show apprehensiveness towards it. This problem that can occur in those organizationsthat have no new recruitments for years [3]. Therefore, this led to resistant the change and unaccepted the new ERP system. Also, as we mention before, the main task of change management is mapping from resistant to change. Actually, The main hurdle faced by all the companies was resistance to change [3]. The author in [1] point out that there are two fundamental sources of resistance when implement an ERP system: perceived risk and habit. Perceived risk refers to one's perception of the risk associated with the decision to acceptan ERP system. Habit refers to current practices that one is routinely doing. In order to reduce employees' resistance to ERP implementation, top management of the organization must employ the appropriate set of strategies to counter and analyze these sources of resistance.

Moreover, Change management requires both an individual and anorganizational perspective [15, 8]. An individual perspective can understand that how one person makes a change successfully and understand what tools we have to help individuals to the make changes successfully. However, Effective change management requires an

understanding for and appreciation of how one person makes a change successfully. Without an individual perspective, we are left with activities but no idea of the goal or outcome that we are trying to achieve [8]. Therefore, there are processes and tools that can be used to facilitate this individual change management perspective like communication and training. In addition, an organizational change management perspective, a process emerges for how to scale change management activities and how to use the complete set of tools available for project leaders and business managers. [1]

3. Change Management Strategies

It is very important to adopt the right strategic changes. These need to be scrutinized as per the context-dependent issues. Also, these need select appropriate and effective change management strategies. However, there are many change management strategies in literature some of them efficient and lead to successful ERP implementation and the other is neither efficient nor useful. In this section we present and illustrate more useful and successful change management strategies for ERP implementation.

In adopting a new information system, several approaches and strategies of change management have been introduced by a number of authors and researchers. (Sieber and Nah 1999) propose the recurring improvisational change strategy as a useful technique for identifying, managing, and tracking changes in implementing an ERP system. It classifies the change management into three types [5].

- Anticipated change: planned and occurs in intended time.
- Emergent change: it is not originally anticipated or intended and arises spontaneously from local innovation
- Opportunity-based change: introduced purposefully.

Aladwani [1] suggested very effective and popular change management strategies, that the marketing concepts and strategies are adaptable to the ERP implementation context. Moreover, this strategies is integrated, process-oriented conceptual framework which is consisting of three phases : knowledge formulation, strategy implementation, and status evaluation to overcome users' resistance to change, top management has to study the structure and needs of the users and the causes of potential resistance among them in the first phase (knowledge formulation), also must be deal with the situation by using the appropriate strategies and techniques in order to introduce ERP successfully; this is done in the second phase (strategy implementation), and finally status of change management efforts in the third phase (status evaluation).

In the Knowledge formulation phase the top management should identify and evaluate the attitudes of individual users and influential groups. This step is effectively managing change introduced by IT and should address such questions as: Who are the resisting individuals and/or groups? What

are their needs? What beliefs and values do they have?, And what are their interests We can offer a good starting point in determining the sources of employees' resistance to the ERP system using the answers of these fundamental questions. However, employee-raised facts, beliefs, and values are good indicators of what may cause their resistance to change. This could well be applied to the context of implementing an ERP system. For example, some users may develop beliefs that their jobs will be threatened by the new system, or that they will not know how to do the job within the scope of such a system. Other users may raise issues about their lack of skill to use computer efficiently, or may say that they have spent many years doing an excellent job without help from an ERP system.

In addition, in strategy implementation phase management can use the knowledge regarding potential users from the previous stage to set up strategies that can best overcome users' resistance to the ERP system, and to convince as many users as possible to adopt it. In an attempt to change the attitudes of potential users of ERP, management must first try to affect the cognitive component of users' attitudes. There are many strategies presented in [1, 2, 8], but a major strategy for achieving this goal is communication. In many cases, ERP implementation failed because of lack of communication [1, 10, 13] also one effective communication strategy is to inform potential users of the benefits of ERP. The marketing people usually communicate the benefits of a product, rather than its attributes, to customers, in order to draw their attention and heighten their realization. In other hand the top management, can create more effective awareness for the ERP system by communicating its benefits to the workers. In addition, knowledge about what the system can deliver to the organization and its workers can build anticipation for the system.

The other strategy is cost minimization strategy, which is developed in such a way that it affects both individual workers and influential groups. On the individual level, the ERP system has to minimize the perceived cost for each employee in order to create a positive adoption attitude [1]. For example, if the worker realizes that the ERP system is an opportunity for enhancing his or her job, thus making it more appealing with minimal additional costs, then him or her most likely will develop an interest in the ERP system.

Another strategy that could help affects the adoption attitude of potential users is differentiation [1]. The quality option is one important basis for product differentiation. In the ERP context, the users' perceived high quality of the ERP system would surely have a positive impact on their attitudes towards that system. Another strategy is carefully timing the introduction of the new system. From a marketing point of view, introducing a new product to a market place at the wrong time would result in a disaster for

the organization. Further, that attitude is one of the critical factors that must be taken into account when timing the introduction of a product.

Moreover, in status evaluation phase management should monitoring and evaluating change management strategies for ERP implementation in this phase the top management measure the system to ensure that the desired business outcomes were achieved. The authors in [14] point out that it is as important to have a performance system to monitor the progress of ERP change management efforts. However, the status evaluation phase provides feedback information to top management in a dynamic manner. In such a case, top management should make every effort to understand what went wrong. In order to be useful, the feedback should be timely, accurate, and systematic. Based on status evaluation phase outcome, top management takes appropriate action. The feedback coming from the evaluation phase may be positive, which means that recorded performance of counter resistance efforts should be maintained (at least). Alternatively, the performance feedback maybe negative [1].

On the other hand, the implementation of the ERP system acted as a catalyst for changes in the established roles in the organization. The degree of such changes was implicated to a certain extent by the chosen implementation strategy. Therefore the authors in [4] use "Big Bang" strategies, which are combined with fundamental Business Process Re-engineering (BPR) activities, radical changes are more likely to occur. [4]

Moreover, in [15] the authors adopted strategy for individual change is called ADKAR - an acronym for Awareness, Desire, Knowledge, Ability, and Reinforcement. In essence, to make a change successfully an individual needs to awareness of the need for change, desire to participate and support the change, knowledge on how to change, ability to implement required skills and behaviors, and reinforcement to sustain the change. In addition ADKAR describes successful change at the individual level. When an organization undertakes an initiative, that change only happens when the employees who have to do their jobs differently can say with confidence, "I have the Awareness, Desire, Knowledge, Ability and Reinforcement to make this change happen."

Prosci's [15] model for organizational change management process. The Prosci's [15] model is similar to change management strategies presented in [1] and we mentioned in previous paragraphs which consist of three main phases: Preparing for change, Managing change, and Reinforcing change. The first phase in Prosci's [15] methodology is aimed at getting ready. It answers the question: "how much change management is needed for this specific project?" The first phase provides the situational awareness that is critical for effective change

management. The second phase of Prosci's [15] process is focused on creating the plans that are integrated into the project activities - what people typically think of when they talk about change management. Based on Prosci's [15] research, there are five plans that should be created to help individuals move through the ADKAR Model. Finally, The third phase of Prosci's [15] process helps project teams create specific action plans for ensuring that the change is sustained. In this phase, project teams develop measures and mechanisms to see if the change has taken hold, to see if employees are actually doing their jobs the new way and to celebrate success.

However, readiness for change strategy plays a crucial role in mitigating resistance to change and thus in reducing the failure rate a prior study of ERP implementation [7] suggested that a push for change from top management was likely to produce positive perception. When employees are positive about and ready for organizational change, they appear to be more willing to try out a system. They think that they might miss benefits if they do not try out the system [16]. Also, when informed about the ERP system and its impact they have less uncertainty about the technical changes [12]. Thus, when employees are ready for change, they will find the systems more useful [7].

In addition, the authors in [14] suggested an active change management strategy helps to make an ERP systems implementation successful by

- 1) Building people's understanding of and commitment to changes associated with the implementation;
 - 2) Aligning key organizational elements (structures, roles, and skills) to support the implementation; and
 - 3) Enabling continuous improvement to sustain the change.
- Each individual that utilizes the new system needs to understand why the organization wants to go from the "as is" to the "to be" processes and the role they will be asked to play in the future system.

The above-described strategy gives top management a clear rule that the introduction of an ERP system should not be introduced until a positive attitude (i.e. an intention to adopt) is built and sustained among potential users. For example, do not introduce an ERP when a critical mass of your employees feels threatened by the system or feels forced (neither convinced nor encouraged) to accept the new system. Solving these problems before introducing the ERP would help set the stage for success.

Finally, we investigate from previous studies we discussed in this section each successful change management strategies consist of three important phases or steps: first step is studying or preparation, second step planning and achieving, and the third step is evaluation.

4. Chang Management Processes

In this section we pay more attention on methods, processes, or tools has been used for change management in ERP implementation. Based on our research, the authors and researcher use different methods and tools to change the organization when implement ERP system, some of them called these tools as change management activities like [3] and other named the tools as change management factors such as [12].

The efficient change management processes lead to success an ERP system. Al-turki et al [17], make survey to evaluate the overall progress of ERP in Saudi Arabia. The results of this survey show 60.8% of the organization had change management processes and activities. In place, 16.2 % had some informal activity while 20.3 % had none. However, the organization implement ERP system with change management processes is more success (success to failure ratio was 6 versus 2.5) as compared to an implementation without change management processes (see figure 1).

The empirically validated, best-practice model developed by Clarke and Garside [20] consolidates change management activities into five major groups. These are commitment, people, communication, tool and methodology, and interaction. The commitment construct covers recognizing the level of change needed, ownership, and the provision of adequate resources. The People dimension relates to the social and cultural aspects of change. The Communication covers issues related to internal and external communication. For instance, communicates project scope, objectives and activities to all people involved. In addition, employees should be updated through organizing focus groups, publishing newsletters, and making use of e-mail messaging system and web 2 technologies like face book or twitter. The Tools and methodology construct relates to training, education and other tools necessary to ensure effective and smooth change. The interaction deals with the synchronization of change with other operations happening in the organization. For example, manages to play the role of integrator and leader of a major strategic alliance initiative bringing together suppliers, customers and consultants.

In essence, the authors in [5] point out that the tools of management of change are leadership, communication, training, planning, and incentive systems. They urge that these tools can all be used as levers and can move great obstacles with a minimum of efforts when applied correctly.

Moreover, Training, re skilling and professional development of the IT workforce is critical and it is important driver of ERP implementation success [1, 16]. User training should be emphasized, with heavy investment in training and re skilling of developers in software design and methodology. Employees need training to understand how the system will change business processes. Moreover,

training offers a good opportunity to help users adjust to the change that has been introduced by the ERP system, and helps build positive attitudes toward the system [1, 3]. Further more, training provides hands-on experience for the users they appreciate the quality attributes of the system and its potential benefits, there should be extra training and on-site support for staff as well as managers during implementation. A support organization (e.g. helpdesk, online user manual) is also critical to meet users' needs after installation. [16]

In addition, top management commitment is critical for the success of the whole ERP implementation process [1,14]. In a recent survey by (Zairi and Sinclair 1995), leadership was ranked the number one facilitator of large transformation efforts (such as the one introduced by an ERP) [1]. ERP implementation can only be accomplished when senior management is totally committed to the initiative. Management commitment and support is the ultimate strategy that will secure the necessary conditions for successfully introducing the change brought by ERP into the organization.

However, [12] present survey focuses on the critical change management factors that play a role in overall ERP success. It offers initial insights into the components of a successful changemanagement process as part of the ERP implementation. In this survey we can find the answer of this question: why do some ERP implementations fail and others succeed? Actually, there are a number of possible explanations. These results indicate that several change management activities may play an important role as shown in Fig 1.

- The number one change management factor contributing to the success of ERP implementations was the involvement and support of Project Leadership (*87 percent*).
- The next most significant change management success factor was a focus on Deployment (*83 percent*), followed by End-User Training (*70 percent*). Deployment activities include using Super Users/Power Users to roll out the ERP solution and providing end-user support after the ERP go-live occurred.
- Surprisingly, only (*40 percent*) of respondents felt that the involvement of Organizational Leadership was a critical success factor, the same level as Team Effectiveness.
- Finally, only (*20 percent*) of respondents attributed success to the overall culture of the organization.

These findings may help companies prioritize their project activities to get a valuable return on their change management investment.

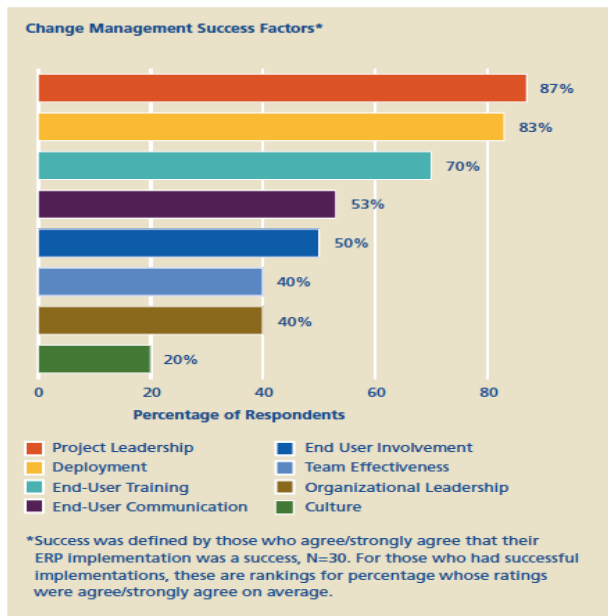


Fig 1: change management success factors [12]

In general, the tools, methods, or processes has been used in change management depend on the organization need and the employee culture in other word, each researcher or authors use different methods than other. But, as we illustrate in this section there are some tools or methods used by all researcher like training, communication and commitment because it is very effective and critical for change management in ERP implementation.

5. Case Study of MADAR

MADAR is an enterprise system working in King Saud University dealing with all administrative software of the university and also do work for outer projects. However, MADAR system is one of successful enterprise system because of this reason we want to discover and investigate the strategies, methods and processes has been used for change management in MADAR implementation. On the hand, we gather some practical information about the reactions and acceptance of change management for MADAR system to measure the success range of MADAR change management strategies and processes.

5.1. Research Methodology

The analysis that has been scrutinized here, are initiated through the relevant interviews and distribution of questionnaires. The data collected from these sources declare some of the primary aspects change management strategies and processes adopted in MADAR system. The purpose of interview is investigate the strategies, tools, and methods has been used when implement MADAR system and what are the main difficulties faced by the MADAR top management and also our main target of this study is to

discover that which change management strategies and methods we mentioned previously adopted in MADAR system. The interview was conducted with managerial expert who has already implemented MADAR system in King Saud University and have attained success. In order to derive and measure the effective and success of change management strategies and process apply in MADAR system by measure the employee's reactions and acceptance of change management for ERP, the data collected from the distributed questionnaires answers to most of the queries. Therefore, the questionnaires were distributed among some of king Saud University mail and female staff with different age, culture, and education level also from different departments. The results derived from the questionnaires and interviews were discussed below.

5.2. Interview Result

The interview was conducted with manager of "MADAR projects" he is having long-term experiences with MADAR enterprise system and King Saud University. And are very great clear about their strategic planning and declarations. The data collected from the interview shows that the implementation of MADAR enterprise system has been popular by most of the organizations and it adds more well managed structure in the application of developmental strategies of the company. The data collected from our interview are presented below:

At the beginning and before implement MADAR, MADAR officers make pre implementation step and make orientation session to study and determine the employee computer skill and experience especially in web application. The pre-implementation step takes eight months to study and determine who are accepting the new system and who are resisting and how much they show their resistance. Also, before implementation they make very impressive awareness about the advantage of MADAR among all university departments using university website, magazine, and by sending email to all university employees. Moreover, the users voted to select best name for new system and they select MADAR as name of new system.

Based on the pre-implementation step, there are many resistance people and the male employees are more resistance than female employees. However, the old style people, technology enemy, low education level employees are more resistance than other. The reasons of resistance may be political issues, special benefit for resisting a new system, afraid from risk and make mistake, or depend on the person type (some of people does not like the change). Moreover, Manager pointed out that the contactors employees have work experience more than 10 years more resistance than other employees.

Before implementation, MADAR officer make gap analysis then make acceptance test for selected key user in order to authorize MADAR as enterprise system.

During implementation, MADAR officers select the more enthusiastic employee in each department to become MADAR representative and give him more training. Moreover, They make more than 300 training session until now, and give 2000 SAR, or laptop for distinct trainee. Also, they give all trainees attended certificate. In other hand, MADAR officers involve the resistance employees in decision making and give them opportunity to attend the meetings to solve the resistance employee's problem and transfer them from resistance to change.

Moreover, there are very impressive communication between end user and MADAR technical support by phone (4 available lines), email, web site, forum, special visiting from MADAR top manager, and lunch parties with all employees. Also, they assign project manager for each department, who is responsible for assess the employees when they face any difficulties.

Manager pointed out that the key point for the success of MADAR is the great support and commitment from top management especially from KSU rector. However, he said for MADAR officer "Pay the time of person, if he did not has a time".

After implementation, the MADAR officer evaluates the development of MADAR job performance for each week employees. The evaluation done by, weekly meeting to discuss the statues of employees, and generate report to determine who are employees dose not work efficiently.

5.3. Questionnaires Result

A questionnaire, comprising 18 questions, was designed to measure the impact of change management strategies and processes on End-User. The questionnaires were distributed among 40 employees) from different departments (male/female employees some of them used MADAR system and other did not used). These selected people were of different age groups and were with different job experiences. The feedbacks received from these people were based on their personal interpretations and the amount of experiences that they have collected till date. We received only 31 questioners: 20 from female employees, and 11 from male employees. However, 12 of these employees (male/female) did not use MADAR enterprise system. The questioner results as follow:

1. At the beginning of MADAR implementation, 70.90% face difficulties when they using MADAR.
2. 96.7 % did not face any difficulties now and they found help and assessment from MADAR technical

support.

3. Also 96.7% observed that the job performance is clearly advanced from beginning of MADAR implementation until now.
4. 90.3 % were benefited form MADAR training.
5. 93.5 % agreed that there is awareness about MADAR feature and benefit before Implementation.
6. 61.2% agreed that the number of training is adequate and suitable for all employees.
7. 96.7% agreed that the interaction and communication between MADAR technical support and employees is impressive.
8. 87.1% agreed that the MADAR technical support solve all employees problem.
9. 54.8%, agreed that there are awards and catalysis for interactive and distance employees.
10. 100%, believed that MADAR system help them to do the job in easy and effective way.
11. 100% not prefer the traditional system before implement MADAR to do the job.
12. 75% of unused MADAR, believe that the risk and frighten to do mistake are prevent theme to use MADAR system.
13. 0% did not try to train and learn about MADAR, because he/she expects MADAR failed.
14. 91.7% of unused MADAR did not have computer skill and experience that is make obstacle to use MADAR.
15. 0% thinks that the new technologies are no effective in management fields.
16. 90.3 believed that they spent many years doing an excellent job without help from MADAR system.
17. 96.7, agreed that are no need for MADAR because they now how they do the jobs efficiently.
18. 93.5 believed that employee's jobs will be threatened by the MADAR system.

5.4. Case Study Contribution

Based on data collected from interview and questioners, we contribute that MADAR implemented among three

phases: pre-implementation phase, Implementation phase, and evaluation. In pre implementation phase, MADAR experts make studying and evaluate the staff, awareness, and staff preparation. In Implementation phase, they make training session for employee, apply good communication with end user, involve the resistance employees in decision making, and assign award for distinct employees. All this done in impressive commitment and support from top management.

However, based on questioners results, we invent that the change management strategies and methods adopted in MADAR implementation was very successful because 96.7% of employees who are using MADAR system did not face any difficulties, and the job performance for those employees are clearly advanced from beginning of MADAR implementation until now. Also, 100% of employees believe that MADAR system help them to do job in easy and effective way and they totally did not prefer the traditional system. In addition, we conclude from these results, that a risk and unfamiliarity in computer and web application are main obstacles that prevent the employees to use MADAR enterprise system.

6. Conclusion

In this paper we provide a very significant and very explicit contribution towards the change management factors for ERP implementation. It is through this research that there will be an appropriate process and strategies for the selection of the lawful kind of change management for achieving better ERP results. However, successful strategies should be consist into three phases: pre-implementation phase, implementation phase, and evaluation phase. The preparation and studying done in pre implementation phase. In implementation phase should be apply the change management activities and processes such as: training, and communication. In evaluation phase the top management must be monitor the employee's job performance. Moreover, top management commitment, communication, and training are more critical change management processes in ERP implementation.

The last in this research, we take MADAR, which is successful ERP system as case study to see what are the change management factors and strategies has been used in MADAR implementation, and what is the impact of these change management strategies in employees. We investigate that MADAR enterprise system use three phases change management strategy and adopt all critical processes and methods like: top management commitment, communication, training, involvement, and awareness.

References

[1] Aladwani. A. (2001), "Change management strategies for successful ERP implementation", Business Process Management

Journal, Vol. 7 (3), pp. 266-275

[2] Lashunda. M. (2010), "Impact of Change Management Consideration in the Implementation of ERP System", UNDB

[3] Al-Masher. M., (2002), "Implementation ERP through SAP R/3: A Process Change Management (PCM) perspective", J. King Saud Univ., Vol.14, Comp. & Info. Sci, pp 25-38.

[4]. Kempainen. I., (2001), "Change Management Perspective in an ERP Implementation", Turku Centre for Computer Sciences

[5]. Al-Mudimigh. A., Zairi. M., Al-Mashari M., (2001), "ERP software implementation: an integrative framework", European Journal of Information Systems. Vol.10, pp 216-226.

[6]. Ron S., (2008), "Multivariate methods in enterprise system implementation, risk management and change management", Int. J. Risk Assessment and Management, Vol. 9, No.3

[7]. Kee-Young. K., Jae-Nam. L., (2008), "The role of readiness for change in ERP implementation: Theoretical bases and empirical validation", Information & Management Journal, Vol.45, pp 474-481.

[8]. Jaideep. M., Dinesh. M., Manu. M., Gunasekaran. A., (2002), "Successful implementation of ERP projects: Evidence from two case studies", Int. J. Production Economics Journal, Vol.75, pp 83-96.

[9]. Umble J. E., Haft. R. R., Umble. M. M., (2003), "Enterprise resource planning: Implementation procedures and critical success factors", European Journal of Operational Research, Vol. 146, pp 241-257.

[10]. Ngai. E.W.T., Law. C.C.H., Wat. F.K.T., (2008), "Examining the critical success factors in the adoption of enterprise resource planning", Computers in Industry Journal, Vol.59, pp 548-564.

[11]. Joseph. B., (2008), "Management based critical success factors in the implementation of Enterprise Resource Planning systems", International Journal of Accounting Information Systems, Vol.9, pp 175-200.

[12]. Deloitte., (2005), "ERP Change Management Survey", The Gallup Leadership Institute.

[13]. Pall R., Pernille. K., (2006), "Identifying the impacts of enterprise system implementation and use: Examples from Denmark", International Journal of Accounting Information Systems, Vol.7, pp 36-49.

[14]. Harris J., (1999), "Designing change management strategies for ERP systems: observations from Alameda County, California", Government Finance Review.

[15]. Prosci., (2004), "Prosci's Change Management Maturity Model"

[16] Fiona F., Nah L., Janet L., (2001), "Critical factors for successful implementation of enterprises systems", *Business Process Management Journal*, Vol. 7, pp. 285-296

[17]. Al-Turki. U. M., Andijani, A. A., Siddiqui, A. W., (2003), "ERP Implementation Trends and Practices in Saudi Arabia", *King Fahd University of Petroleum & Minerals*.

[18]. Al-Masher. M., Al-Mudimigh. A. S., (2003), "ERP implementation: lessons from a case study", *Information Technology & People*, Vol. 16, pp 21–33.

[19]. Al-Masher. M, Al-Mudimigh. A. S, Zairi. M, (2003), "Enterprise resource planning: a taxonomy of critical factors", *European Journal of Operational Research*, Vol.146, pp 352–364.

[20]. Clark, A.Garside. J., (1997), "The Development of a Best Practice Model for Change Management", *European Management Journal*, Vol.15 (5), pp 537-545.

[21]. Zairi, M., Sinclair. D., (1995), "Business process re-engineering and process management: a survey of current practice and future trends in integrated management", *Work Study*, Vol. 44, 1995, pp 6-13.

Hala Al-Shamlan is a lecturer in department of Information Technology and currently she is pursuing her PhD from King Saud University. She has implemented many IT projects during her previous education at King Saud University. She is interested in the research area of Information Technology and Computer Science and has many publications in her field of interest.

Abdullah Al-Mudimigh is associate professor & senior IT consultant at college of computer and information sciences, King Saud University in Saudi Arabia. Currently he is a general manager of ERP project (MADAR) at King Saud University. Dr. Al-Mudimigh has many years of experiences working in IT. He also IT consultant to many government departments and firms. He is a member of many committees at many organizations, in Saudi Arabia and globally. He has been published at internationally recognized refereed journals and conferences. He also acted as a reviewer for many journals and conferences. His current research interests focus on the areas of IT business value, organizational and strategic impacts on IT, Electronic business, Customer Relationship Management (CRM), Supply Chain Management (SCM), and Knowledge Management (KM).