Understanding Change Management is Essential for Information Systems Development and Implementation in the 21st Century

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Abstract. In the 21st century, people’s lives have been rapidly changed by information system and how to manage the process of the change is vital for developing information system successfully in the highly competitive society. Therefore, the field of change management has received much attention in recent years. The purpose of this article is to explore the importance of the role of change management which plays during the process of change. Documentary research and qualitative research method are mainly used in this paper and the effective management methods will be given after the analysis of the case studies and documents. These methods are used to improve management approaches and develop information system.

1. Introduction

Information systems have developed rapidly in the 21st century. They have increasingly changed people's lives, which include transactions, decision-making, communications and data collection. Changes bring new models and innovations. Changes management and leadership play an important role during the process of the change. The leaders of the organizations should consider about the way of decreasing the impact of change from individuals and groups within the organization. It is also vital to discriminate planned processes of change from emergent processes of change and understand when we need to combine both of them. The concept of consultancy has gained much attention in the process of the change. Understanding different consultancy can help individual and organization to deal with the problems during the change. How to manage the process of the change is important for information systems to success in the highly competitive 21st century.

2. Analysis of the Role of Management and Leadership Related to the Human Implications

Resistance from people is one of the most important reasons for failures of a large number of change management. Change is good but some people do not like change. The reaction from people to change is not predictable. Change management is people management. Leadership has played an important role in the change process.

“People are the most important asset, and their commitment goes a long way in determining effective organizational design and development.”(Paton and McCalman, 2000, p121). People do not like change, because they fear of failure. They have no idea about what benefits the change can bring them and what they can obtain from the change. How to reduce people’s fear? First of all, if people can feel that the project is their own and it can bring development. (Breece, 2009). It is an important task for leaders to help people understand why the change is and why it should happen. It is also important to understand what they are concerned about and what they fear about. Secondly, leaders should let people know that the change will decrease the burden and it will not threat their security. Finally, the support from the top management can bring people assurance and trust. If they know their interests can be guaranteed, the fear about change will be reduced.

Leadership is very important to manage organizations in the change process and is also vital for people working in the organizations. (Carnall, 1999) Communication and training are two effective ways for leaders to manage people.

• Communication:
Communication is essential for the leaders in the change process. Even though one person has the
ability of adapting himself to meet the new standards and he knows what to do, he will still fail unless he can communicate this to other people in an effective way that they are able to understand and accept (Hersey and Blanchard, 1988). Communication is a two-way street. If you want people to understand why the change should happen, firstly you should understand why they resist to the change. The most important thing to understand people is to understand their reluctance. Addressing their reluctance can help you to communicate with them more easily (CIO update, 2009). It is an effective strategy to choose a medium for reaching people, such as, e-mail, tea breaks or workshops. After having a larger number of audiences, you can establish a schedule to communicate with them regularly. Provide people consistent messages and encourage them to provide feedback. Effective feedback can help you to adjust the process of the change.

- Training:
  Training is another effective way to help people accept the change. The training should be about some certain skills that people will need. A plan about the training is required. How to give the training? A face to face lecture and a computer tutorial are both good ways. For example, two years ago, I worked for a software company which was specialized in call center product. After establishing a new call center system for a Japanese company, we were requested to provide their employees a presentation about the whole system. We were also asked to provide them instructions by e-mail about small program changes in the after years. Whichever way we gave them training in, they all can help their employees adapt the new system in a short time.

3. Analysis of Planned and Emergent Processes of Change

Before I started a new system, I liked using a Gantt chart to manage the project. It was very useful to manage the change at beginning, but after some time, I found it became more and more useless even I updated it. One of the main reasons for this is emergent processes of change. Mintzberg (1989) compared a project manager, who crafted a strategy for his company, with a potter. He set out an intention and sometimes made small adjustments according to the clay changed. Sometimes he even made a big change because of a new chance that was invisible before. Mintzberg named this strategy ‘emergent ’.Emergent strategy is different with deliberate strategy. “Deliberate strategy focuses on control while emergent strategy emphasizes learning.”(Mintzberg, H. et al., 2005, p189).The purpose of deliberate strategy is to make sure of realizing the managerial intentions in action. While the purpose of emergent strategy is to understand by taking the actions what intentions should come firstly. Change is deliberate sometimes. During the change, there are conscious actions and reasoning. This kind of change is named as planed change. Contrast to planed change, emergent change is not easy to control because it happens in an unplanned and spontaneous way. Emergent change can happen in two situations:

- Firstly, sometimes, the leaders of organizations make many decisions without relation to the existing changes. So these changes are not planned changes. But those decisions might be base on some unspoken and unconscious assumptions about the future of the organization and its environment (Mintzberg, 1989). Therefore, these decisions lead to emergent changes.
- In addition, some internal factors, such as distribution of knowledge and uncertainty, as well as some external factors, such as political climate and the economy affect the changes to be out control of leaders. Emergent change can happen in the most carefully planned projects because of those internal and external factors.

Emergent change is unpredictable and it cannot be avoid. So compared with planned change, it is not easy to control and monitor it. But we can learn a lot from emergent change and it can improve the ability of managing change. For example, three years ago, when I worked in the China Railway, they wanted to establish a HR management information system to take place of their old traditional manual system in one of its branch. It was not a difficult project because there was already the same system in other branch. But at the end of the project, we found the financial support was not enough because at the beginning we spent too much funds on the network infrastructure. Actually, it should be a planned change, because we can predict it at the beginning of the project. But some leaders
who were responsible for this task did not find out the problem. So at the end it became an emergent change, and the project manager applied for the more funds from the top management to solve the problem.

4. Analysis of Three Consultancy Philosophies

According to Breese (2009), there are three different models of consultancy: purchase of expertise, doctor/patient and process consultation.

The first model of consultancy is the purchase of expertise model. In this model, clients give diagnosis and then expert consultants do what they are told. Consultants have the main responsibility for solving the problems. If the consultant is competent, the client should accept the responsibility. The boundaries of task in this model are very clearly identified. So the likelihood of successful consultancy mostly depends on whether the diagnosis that the clients gave is correct or not (Schein, 1999). For example, if a manager in the company wants to know some information from his competitive companies. He will hire a consultancy to investigate them. Before the consultant works, the manager will tell him what kind of data he wants, such as the number of employees in their companies, the price of the same products, their future marketing strategy, and so on. After the manager tells the consultant what he wants, the next tasks belong to the consultant. If the consultant is competent, the manager will get correct data from him.

The second one is the doctor-patient model. In this model, consultancy is like a doctor, who gives a ‘prescription’ to the patient. Usually the consultant gives diagnosis based on the information that is told by clients. And then the consultant gives a solution to the clients. Clients will accept the main responsibility if the consultant is perceived as competent. The boundaries of task are fairly clearly and specific. But it will depend on what the diagnosis is. In this model, the likelihood of successful consultancy mostly depends on whether the client’s diagnosis is correct or not and whether the client real accurate data to the consultant (Schein, 1999). For example, in a network security consultancy, they provide the solution to clients after they find out the problems of the clients’ network. Meanwhile, clients also give some information about the network problems to the consultant to help them. So if the information is accurate and the consultant is competent, consultant can successfully solve the problems.

The last one is the process consultation model. In this model, the relationship between clients and consultants is like partner. Usually, they work together to diagnose and solve the problems. So the responsibility for the task is a joint responsibility. Boundaries of the task are potentially. Clients and consultants have the same responsibility for the task. There are some essential assumptions about this model as below (Schein, 1999):

- Clients do not know what the problem is and they need help for diagnosis.
- Usually clients have no idea about what help consultants can provide.
- Clients often have an intention to solve problems, but they need consultants to help them identify how to solve it.
- If the employees or managers in the organizations can learn how to diagnose and manage their own weakness and strength, they can become more effective.

5. Exploration of My Own Role in Change Processes

My role in the change process is a consultant when I worked in a software company in China. I used to work in an IT company which is specialized in call center products and services. This company provides solutions of call center services for clients. During the process of establishing new system, we need work with clients together to find out the most suitable solution for them. We cannot finish the projects without their cooperation and help. According to the definition of the consultancy, this model of the consultancy is process consultation. In the following section, I summarized some essential steps that we took through the consultancy (Burrello, 2004):

- Firstly, communicate with the senior management in the clients’ organization. It can help us to find out what the change is and why it should happen. Confirm the project scopes and
objectives, and then tell employees of the organization what will happen.

- Secondly, select right persons to form a ‘transition team’, in which someone is really responsible for every change. Make sure that timescale is established and resources for all changes are allocated.
- Thirdly, establish a channel for transition team. Transition team can get feedback from employees by this channel. They also can provide the updated process for employees by this channel.
- Fourthly, develop and implement a training program for the staffs. This program includes some aspects, such as how to accept the change, some professional skills related to the new system and so on. Communication is a very important part in this step. Good communication can help staffs understand the necessary of change and adapt it very quickly.
- Fifthly, work with the senior management to remove the obstacles in the change process. Throw the old rules and
- Finally, work with senior management to make the solutions to deal with the problems from the changes.

6. Conclusions

Change happens everywhere. Information system has developed very fast during the last twenty years. It has brought a great of change to the society. Whether the information systems succeed or not depends on change management. How to manage changes is very vital for the organizations. Mostly successful information systems can result from effective change management. Understanding change management is essential for successful information systems development and implementation in the 21st century.

References