

Engineering Management 620  
Individual Research Paper  
November 25, 1996

Fangqi Hu

**1996-F-520-10-1**

## **Keep communicative in a service organization**

An Individual research on  
'The Impact of Technological Change in a Service organization'

Engineering Management 620  
Individual Research Paper

Fangqi Hu

## **Keep communicative in a service organization**

An Individual research on  
'The Impact of Technological Change in a Service organization'

### **Starting Paper**

R-4:

Shlomo Globerson, Iris Shalev, and Oded Shenkar, 'The Impact of Technological Change in a Service organization', *IEEE Transactions on Engineering Management*, Vol. 42, NO. 4, pp. 382-386, 1995.

**Abstract** The starting paper, 'The Impact of Technological Change in a Service organization', is the first quantitative research on the impacts of technological change within a service organization. It is very effective to design three instruments to conduct a statistical experiment in a Banking Organization. The experiment is successful and the conclusions are interesting. However, the explanation is not convincing to support the conclusions. The individual research is based on the starting paper. It suggests that the impact differences among different echelons within a service organization come from the different communication level among echelons. Moreover, the individual research concludes that it is very important to keep a communicative environment in a service organization, and thus the impacts could be less different among different echelons in a more communicative service organization.

### **Part I: About the Starting Paper**

The paper presents an interesting study: although significant changes are expected to take place when an organization brings in a new technology, the technological changes may have different impacts on different echelons within the organization.

Based on the fact that there exists a disagreement about the nature of the impacts of technological changes, positive or negative, the paper suggests that there must be contingency factors to influence the actual impact of technological changes. To support the suggestion, the paper takes a statistical research in a service organization. The research is about the reaction of bank employees and branch managers to the introduction of a significant technological change.

The methodology for the research is statistical analysis. First, the analysis carries the following two hypothesis:

1. Employees who have been exposed to the change will report an increase in motivation and satisfaction.

2. Employee's reactions to a technological change depend on their level within the organizational structure.

The three instruments are used in the research:

1. MPS (Motivational Potential Score), an integrated score about job variety, task identity, task significance, autonomy, feedback, and interaction with others;
2. JCF(Job Content Form) refers to the number of tasks added to or deleted from each job and the specific changes that were incorporated;
3. MSF(Manager's Survey Form), is to identify the method by which the technological change was introduced.

Carried out on a sample of 23 branches of the bank of which 12 are in the experiment group and the other 11 branches in the control group, the research gets the following interesting and exciting findings, which are fully supported by numerical figures:

1. The introduction of a technological change expands job contents in the organization;
2. The staff and managers perceive the expansion in a way that it enriches the employee's job content significantly, whereas the employees themselves do not perceive the expansion;
3. There is a positive impact of the change on staff about their autonomy, motivation and growth satisfaction, but no such positive impact comes from line employees. By the contrast, the managers perceive the change as negative, in terms of their own motivation and growth satisfaction;
4. The intensity of the impact is greater for the younger age group and for women.

As a final note, the research paper suggests that when a project dealing with the introduction of new technologies is being planned, employees' involvement and training should be considered as part of the project. The organization should make sure that the change program has positive potential for each echelon to get a supportive attitude among their employees.

## **Part II. Comments on the Paper**

The authors are resourceful to conduct such a research in the field of technology management. The paper contributes to research in the field by submitting the first quantitative report about the impacts of technological changes. There is much research focuses on the changes of the whole industry, but few on a micro view within an organization.

The definitions of the three instruments among the research are very successful for the statistical research since they cover most of the key factors in the research, and the conclusions are valuable to the related literature.

However, an effective factor, the communication level in the introduction of the technological change, has not been incorporated in the instruments. The ignorance leads to a not good explanation of the statistical results. The interesting results can not be explained by involvement intensity without the communication level instrument. For example, for the conclusion that even if staffs are not as intensively involved in the change as the line employees are, the impacts on the staff are more significant, the paper attempts to explain it in a way that staffs have greater ability to understand and accept changes. At the same time, the paper explains the negative impacts on managers' satisfaction as a result that their own role are shrunk.

Apparently, the reason for the ignorance of communication level is that the paper misses an important hypothesis, i.e., the third hypothesis: employees' reactions to a technological change may also depend on their communication level about the change.

### **Part III. Expanded Researches about the Paper**

Based on the starting paper and a great literature research, the individual research believes that better explanations for the starting paper conclusions are about the communication level. For example, the reason for that the managers are perceiving satisfactory in a negative way is that, although the managers can notice that the technological change enriches the employees' job content significantly, they could not understand what the enrichments mean to them if there is a lower communicative level among the different echelons.

The individual research regards the communicative level as an important factor throughout all stages of a technological change in a service organization. The research aims to find out that within a service organization, 1)It is important to keep communicative to begin a technological change, 2)It is important to keep communicative during the technological change, and 3)It is important to keep communicative after the technological change.

#### 1). It is important to keep communicative to begin a technological change

Before we talk about this, we can have a review that how does a technological change enter into a service organization. Customers' demands are always the motivation to change for a service organization, and the demands keep changing in two respects: the scope of services and the quality of services [8]. Particularly, the service quality is a critical demand for both customers and service providers. Customers seek and enjoy high quality services, while service providers hope that quality services will enhance their marketing profits [5]. They are always perceiving various kinds of changes and generating new demands which require technological changes. For example, for banking organizations, 'what customers are coming to expect and want, is access to their entire wealth—any time, any where on the face of earth.' [6]

Generally speaking, the management level responds to the changes of customers' demands first; successful management leads the organization to 'get to where the customers are just before they get there, offering these customers what they didn't even know they wanted.' [9] The management echelon is perceiving the change of customers' demands while the customers are enjoying the favorable changes in the services.

With such a marketing interface, the top level of the organization is learning what the organization need—technological changes [3]. Once the responses for a certain new technology or new demands come into certain decisions, or strategies, a technological change begins entering into the service organization.

It is important to keep communicative at this stage. There would be conflicts at the beginning of a change, especially a technological change in a service organization. Keep communicative among different echelons is to find out more conflicts at the beginning then eliminate the conflicts toward the end, and is to develop an effective corporate renewal starts at all-level echelons, and to focus all-level echelons' efforts on the change being introduced in. [1]

#### 2). It is important to keep communicative during the technological change

However, the change takes place in a competitive environment rather than in a vacuum. [2] During the introducing of technological change, the organization is risking unexpected internal changes when it is expecting a positive change. The unexpected internal changes come from the different echelon basis. For example, the people involved in research and planning level see the technological change from a macro point of view, while the people who must take the happen—from branch personnel to telemarketing groups—operate from a micro point of view.

At this stage, it is vital for an organization to keep communicative among all levels to overcome the inertia and effectively bring the technological change. Coordination or team work among all echelons is needed to diagnosis and solve a problem, and high level commitment is vital for flexibility of the organization to support the change process. Keep communicative is an effective way to keep all echelons knowledgeable about the organization itself as well as the changing environment. Building competitive advantage requires the communication. [1]

### 3). Why is it important to keep communicative after the technological change

Among all the impacts of technological change for a service organization, the most significant one is that the change enables the organization to provide better service to customers. [4] Since the effects of the using of new introduced technology can not be isolated from the effects of other factors, it is difficult to estimate the impacts of a technological change on productivity or performance in the service organizations. However, customers can perceive the successful technological changes. New technology provide customers not only the same old service in a new way, but also new kinds of services such as ‘nonbank services’. [7] An example is that supermarkets with ATMs are now surrogate bank branch offices for transactions such as cash withdrawal.

A service organization must keep changing because it is in a ever changing environment. Keep communicative within the service organization is still important even after a technological change. It is a good way to keep the entire organization knowledgeable about the customers’ changing demands.

### References:

- [1]. M. Beer, R. A. Eisenstat, and B. Spector, ‘Why Change Programs Don’t Produce Change’, *Harvard Business Review*, Nov.—Dec., pp.158-166, 1990.
- [2]. W. Boulding and R. Staelin, ‘Identifying Generalizable effects of strategic actions on firm performance’, *Marketing Science*, Vol.14, No.3, pp.G222-235, 1995.
- [3]. G. S. Burton-Cooper and P. Burton-Cooper, ‘Learning What they need when they need it’, *Banker’s Magazine*, vol. 178, No.4, pp.42-46, 1995.
- [4]. Committee to Study the Impact of Information Technology on the Performance of Service Activities, etc. *Information Technology in the Service Society: a Twenty-first Century Lever*, pp.85-107, National Academy Press, 1994.
- [5]. P. A. Dahholkar, ‘Customer Evaluations of new technology-based self-service options: An investigation of alternative models of service quality.’, *Research in Marketing*, vol. 13, No.1, pp29-41, 1996.
- [6]. W. T. Gregor and J. M. Sandler, ‘The outlook for Customer Payment Service’, *Banker’s Magazine*, vol. 178, No.1, pp18-23, 1995.
- [7]. M. D. Levison, ‘New Delivery Systems Beyond Providing Basic Services’, *Banker’s Magazine*, vol. 178, No.4, pp24-26, 1995.
- [8]. G. Miller, *Selecting Financial Services for government*, pp.37-46, Government Finance Officers Association, 1984.

[9]. F. Popcorn and L. Marigold, *Clicking*, Harper Collins Publishers, 1996.