

**CHAPTER 5: Discussion****5.1 Discussion**

The major finding of this study is that different types of users resist the system for different reasons, in different ways, and this can be managed in different manners. Similar differences were also found with general MIS implementation (Dickson et al. 1970) and with TPS and DSS systems (Jiang et al. 2000). However, new findings here are that sometimes the two levels of users may align to challenge the benefits of the system; managerial users may use operational user's complaints against the system implementation and operational users may be affected by managerial users' attitudes towards the usefulness of the system. It is worth to note and to study that consultants may play an important role in system implementation and their knowledge of the software can affect users' perceived usefulness of and attitudes towards the system. Table 5-1 shows the summary of links and extension to current study.

**Table 5-1: Summary of links and extension to current literature**

<b>Previous Study</b>	<b>Additional findings in this research</b>
Dickson and Simmons 1970	➤ Ref. Table 5-2.
Jiang et al. 2000	➤ Ref. Table 5-3
Kotter et al.1979	➤ Additional efforts were found to be the most important reasons for resistance, and managerial users mainly focus on misunderstanding and different assessment.
Markus, 1983	➤ Resistance may cause conflict among departments in Enterprise Systems implementation.
Joshi, 1991	➤ Operational users: focus more on their parochial-interest. ➤ Managerial users: think from the organization's point of view.
Strebel 1996	➤ This study amplifies Strebel's suggestion that resistance do occur from different assessment from change initiators to employees.
DeLone and McLean 2003	➤ Managerial users care more about the information quality, while operational users care more about the system quality. ➤ Service quality is important to both.

In Jiang et al.'s study, change in job content and uncertainty are the main reasons of resistance to TPS use. In this study, the content of job change mainly falls on the additional efforts and complex UI to operational users. Uncertainty may occur from loss of special skills, fear of learning higher skills, and insufficient knowledge about the new systems. Additionally, misunderstanding and lack of trust could be other reasons for ES resistance, and increased

monitoring is very important in operational resistance. For DSS users, in addition to changes in job content and uncertainty, Jiang et al. suggests a different reason of resistance, change in decision making, and this is the most important factors in managerial concerns of resistance in this study as well. However, misunderstanding and disagreement of system benefits are additional factors here. Both managerial and operational users have reasons of misunderstanding the implementation process and different assessment of system benefits. This could be the unique characteristics of the enterprise-wide change brought by Enterprise Systems. Most strategies suggested in this study are similar to Jiang's findings, however, co-opting a group is an additional one suggested in this study. Orientation session could be more effective to managerial users than operational users. While co-opting a group is important to both types of users in ES-enabled change.

**Table 5-2: Comparison with Dickson and Simons's discovery**

Reasons for resistance	Dickson and Simon's discovery	This Study
TPS (Operational Users)	Changed interpersonal relation or work pattern* Changed superior-subordinate relationship* ----- Threats to economy Threats to status or power Uncertainty or unfamiliarity Increased rigidity or time pressure Role ambiguity Feelings of insecurity	Additional efforts Increased monitoring Insufficient knowledge Feared to learn higher skills Loss of special skills Disagree the system benefits
DSS (Managerial Users)	Threats to status or power* Role ambiguity* Feelings of insecurity* ----- Threats to economy Uncertainty or unfamiliarity Changed interpersonal relation or work pattern Changed superior-subordinate relationship Increased rigidity or time pressure	Decision making can not be replaced Disagree the system benefits

\*: Strong possibility of being the cause of resistance from Dickson and Simmon's study.

Regarding the assessment of change success, operational users tend to focus more on outcomes on themselves. This is aligned with Joshi (Joshi 1991) that end users concern more about gain or loss in their equity status. However, Joshi's findings did not address concerns of managerial

users that they tend to focus more on the relative outcomes not only of self but also for the organization.

**Table 5-3: Comparison with Jiang et al's discovery**

<b>Reasons for resistance</b>	<b>Jiang's discovery</b>	<b>This Study</b>
TPS (Operational Users)	Change in Job Content Uncertainty	Additional efforts Increased monitoring Insufficient knowledge Feared to learn higher skills Loss of special skills Disagree the system benefits
DSS (Managerial Users)	Change in Job Content Change in Decision Making Uncertainty	Decision making can not be replaced Disagree the system benefits
<b>Promotion Strategies</b>	<b>Jiang's discovery</b>	<b>This Study</b>
TPS (Operational Users)	Retrain employees* Rewards ideas* Open lines of communication* ----- Listen and provide emotional support (Show sympathy) Document standards Provide change information Involve employees	
	Pace conversion Clear authority Orientation	Co-opting a group* ----- Clarify job definition
DSS (Managerial Users)	Involve employees* Open communication* Provide change information* Retrain employees* ----- Listen and provide emotional support (Show sympathy) Rewards ideas Document standards	
		Co-opting a group* ----- Orientation sessions Clarify job definition

\*: Major effective strategies for managing resistance in this study.

Besides Kotters et al's suggestion, "additional efforts" is concluded as an important category for resistance to change. Coercive strategies are not highly noted by many interviewees; however, they were often applied under certain situations. When project was delayed or previous change management failed some organizations would choose to force the change with

strong penalty for resistance. This is the same to Kotter's suggestion to apply coercive strategies under critical circumstances. Although threatening employees was executed rarely did the employees have fire; the worst case was to be kicked out of the project team.

Conflict among different departments usually occurred in the ES implementation process. They complain or attribute faults to on another. Markus et al. (1983) have pointed out that the political power shift should be a reason for resistance, and it is found in this study that conflicting relationships among department are more obviously occurred than problems among personal relationships, such as the conflict among accounting department, sales department, and purchasing department, etc. It is not only the war between business units and IT department, but also a battle among departments and business units. This supports O'Brien's (1979) suggestion that conflict will occur among organizations.

*"You cannot correct any order merely by a phone call as they did before, instead, you have to ask the accounting staff to retrieve and reenter the order. Sometimes the accounting people got upset for the pressure of closing account and lost patience with the requester." (Interviewee 4)*

By comparing the result with Joshi's equity model, this study found that operational users care more about their own interest, while managers assess the gain or loss not only for their own interest, but also for the stake of the organizational benefits. This could extend Joshi's equity model to another level. Joshi suggested that the three-levels of equity assessment is based on the gain or loss of the users themselves, and that of themselves against the organization or other staffs. But managers here are found to further assess the equity from their company's point of view.

*"Managers are sometimes the stockholders of their own company, and they seem to make more efforts on their jobs than those of operational users. This might be the reason why they are more concerned about the system benefits and its future." (Interviewee 11)*

This study also confirms Strebel's view that resistance do occur from the different assessment of the change, whether for managerial users or operational users. The result findings provide an important source for studies of IS success (DeLone et al. 2003) that different types of users may assess success based on different factors: managerial users tend to emphasize information quality while operational users tend to focus more on system quality. Service quality is important for both types of users with an emphasis on consultant's support when implementation, and mostly from the IT department after implementation, because many

interviewees pointed out that formal training before system went live was not sufficient for the real practice. Users encountered more unplanned problems in later use. Interviewee 4 has given a rare-but-often-noted case in an ES-user organization, WWW, that this company bought materials from supplier A and sold goods to customer B. Supplier A happened to owe customer B certain amount of money and requested WWW company to settle the bill directly with customer B instead of paying supplier A and charging customer B. This case was never taught in the training session and has made the accountant in WWW puzzled about the ES procedures of handling the complexity.

*“Training is not always sufficient for their use of the systems. There was always problem-free in the class and troubles in practice. They still come for help when problems encountered.”*  
(Interviewee 4)

*“To learn is one thing; to do is another!”* (Interviewee 6)

*“We have trainings for at least 10 sessions on every flow in detail, but users were still unable to use the system properly!”*(Interviewee 8)

From the finding of this research, critical success factors in change management, such as top management support, business involvement, communication and training, can be specified for different types of users. For top management, in addition to providing budget support for training and communication, it is important to discuss system benefits with managerial users and emphasize the success of operational changes through their management skills. One important tactic in the beginning of system implementation is to rapidly sense the resistance and take actions promptly to reduce additional possibility of resistance. The content of communication should be different between managerial and operational users because of their different concerns, and according to whether they are focused on self or organizational benefits. While training courses for operational users should concentrate on familiarity with system use, additional managerial skills, such as communication, consultation, and leadership are necessary for managerial users. The links and extensions with critical success factors are shown in Table 5-4.

**Table 5-4: Links and extensions to critical success factors of ES**

<b>Success Factors of ES</b>	<b>Strategies applied to resistance</b>
Top management support	<ol style="list-style-type: none"> <li>1. Provide budget for training and communication</li> <li>2. Discuss the system benefits and emphasize the management skills with managers</li> <li>3. Sense resistance rapidly as well as proper actions to reduce additional possibility of resistance</li> <li>4. Provide immediate incentives to encourage change</li> </ol>
Business involvement	<ol style="list-style-type: none"> <li>1. Involve managers in business strategies as well as ways of generating benefits of using the new system.</li> <li>2. Involve operators in effective system use and emphasize their importance to the success of the implementation and further use</li> </ol>
Communication	<ol style="list-style-type: none"> <li>1. Provide sufficient information and listen to their suggestions as well as the benefits of using the new systems to managerial users.</li> <li>2. Listen to operational users' complaint about the easiness and efficiency of using the system, and provide them sufficient help and trainings to overcome the difficulties.</li> </ol>
Training	<ol style="list-style-type: none"> <li>1. Operational users need more training on repeated and focused use of the system operation.</li> <li>2. Managerial users need more training on analyzing the reports and skills of managing their subordinates.</li> </ol>

Some strategies may be helpful for resistance prevention and can be widely used before changes initiated, such as document standards, morale boosting activities, etc. These strategies are not highly scored by those project managers. Part of the reasons could be that these strategies were applied in the beginning of the system implementation and hence no specific resistance behaviors were noted afterwards. Therefore, these project managers won't consider them as effective way of mitigating resistance but a necessary way of preventing resistance and promoting acceptance. It is also interesting to note that some strategies, such as increased pension benefits, or deals with unions, were not rated as useful in Taiwan. This could also be the differences among culture. Rarely do unions exist in Taiwan and top managers have more power to apply coercive strategies to those who resist change.

Moreover, Hasan et al. (Hasan et al. 1999) have pointed out that culture issues could influence the impact of IT use. Problems can arise when there is a difference between the culture of an IT product and the culture of its users. As vendors of different cultures and users from different countries are supposed to be different in their use of Enterprise Systems, it is believed that the framework of different types of users can be applied to different culture backgrounds and worthy of further studies.