INVESTIGATING INNOVATION IN ENGLISH LANGUAGE TEACHING: THREE CASE STUDIES AT A JUNIOR COLLEGE IN TAIWAN

By

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ABSTRACT

This qualitative research study attempts to investigate innovation in general English language teaching/learning as perceived by English teachers at a private vocational junior college in Taiwan, a Chinese-speaking context. The underachievement reported in the literature highlights the important issue that innovation is always constrained by many factors at all levels, in terms of institutional, educational, and cultural levels, etc. (Kennedy 1988). Recently research on innovation has been moving from a method-oriented understanding to broadening perspectives beyond language and classroom (Holliday 1996). In this context, this research aims to identify the mechanisms of three ELT innovation projects and investigate the factors affecting their success on many levels. The method adopted was ethnographic research that gave a thick description of how the teachers participated in the ELT projects leading to innovation.

The three ELT projects to be examined were carried out on a school basis and located in the same context. One was initiated entirely top-down, one from both directions, and the other bottom-up. The first one aimed to implement a new teacher role of teacher-cum-researcher, the second to integrate technology into the English program, and the last to improve teaching through better materials. These projects were non-aided and independent of expatriates, and in this way different from the expatriate-aided ELT projects in the literature. Besides, unlike many projects that are designed and
evaluated by their change agents, these projects were examined from the perspective of the end users (teachers), and in this way provide insights from a different angle.

Several conclusions can be drawn from the analysis of the outcomes. It is found that the rise of the double centre-periphery innovation model in the field of education was ineffective in helping under-informed implementers to develop their change capacity. Dalin’s four barriers (1983) are inadequate to address the barriers to innovation effectiveness, without taking the communication barrier and local negative rhythms into account, as they also inhibited the success of innovation. This study also shows that it seems naïve to expect that success is more likely in bottom-up innovations than in top-down innovations. In fact, if innovations, whether top-down or bottom-up, are to succeed, they require the same favourable conditions to facilitate their success, such as the development of the change capacity and effective conflict management.
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Introduction

Due to globalisation, modernisation, and the wide spread of English as an international language, the issues involved in English language teaching (ELT) have become more important and complex. ELT educators have always been concerned with the improvement and development of ELT environments in a variety of contexts. Nowadays, the shift from a discrete-skill to an integrated-skill approach in English language teaching/learning has forced whole environments to re-consider their existing practice and to innovate. Also, computer-aided instruction has led to new opportunities and demands for teachers and administrators. A great deal of evidence shows that the ELT profession has been encountering changes in response to the evolving needs of all parties concerned, i.e. teachers, learners, and schools, etc., around the world (Stonyhoff 1989). Therefore, the issues of innovation have come into sharp focus.

A large amount of research on curriculum development has been done in different fields of education. It has uncovered both successes and failures. Research on educational innovations reveals many problems which result in non-implementation of planned innovations. These include the problems of inadequate knowledge of implementation, and lack of awareness of the limitations of teachers and school administration, etc. (Pink 1989; Fullan 1992; Fullan and Hargreaves 1991). Recently, the literature in the field of ELT has reported innovations in the implementation of new teacher roles, new practices, new materials, etc. Most principles for innovation are derived from English-speaking countries and transferred throughout the world. For instance, the learner-centred, communicative approach which originated in British ELT has been recommended almost everywhere. Although some reports mention the success of such innovations, others have concluded that many problematic implementation issues emerge from a direct transfer, after it has been put into use worldwide, such as in China
(Burnaby and Sun 1989; Anderson 1993; Hui 1997), Indonesia (Tomlinson 1990), Greece (Karavas-Doukas 1995), and Hong-Kong (Carless 1998), etc. It has been found that problems in the implementation in many cross-culture innovations are predominantly caused by the incompatibility between the imported method and its local context, in terms of educational, social, and cultural conflicts, etc. Failure to manage innovation effectively by adopting an appropriate change strategy or providing adequate supporting resources was also an impeding factor leading to a minimal degree of implementation. All these negative forces highlight the important issue that the decision on the method in ELT is not oriented so much to the selection of the most effective one, but of the most appropriate one that allows adaptation to fit into the local context. They also highlight the notion that innovation is extremely context-sensitive, and therefore it calls for better understanding of the mutual relation between innovation and its local contexts on many levels. Thus, research on innovation has been moving from a method-oriented understanding to broadening perspectives beyond language and classroom (Holliday 1996). For instance, several reports attempt to explore change in ELT in various contexts, with the intention of addressing a full understanding of innovation issues and innovation management on many levels other than those inside the classroom (e.g. Doyle 1999; Sergeant 1999; Goh 1999).

However, so far the knowledge and understanding of what is involved in effecting innovation in many projects has been investigated mostly by their change agents. Many ELT innovation projects reported in the professional literature are designed and examined by their authors as leading change agents, not by end users, i.e. teachers. (e.g. Gray 1990; Jarvis 1992; Tomlinson 1990; Barmada 1994; Guariento 1997; Markee 1997, etc.). In those projects, the authors/reporters design, introduce, and monitor the process of implementation. They tend to reflect on the innovation process and evaluate their own ‘product’ from the views of a ‘top’ change agent, rather than a ‘bottom’ participant. Thus, Guariento (1997: 399) has
indicated that many projects were examined from the viewpoints of the expatriate curriculum developer alone, largely neglecting the views of the local colleagues involved and therefore presents an incomplete picture of the overall project. However, to give a complete picture of the innovation process, it is necessary to investigate the mechanisms from different perspectives, particularly from those of end users.

Moreover, many innovation projects reported in the literature tend to involve outside experts who can provide adequate outside expertise. So far we have little understanding of the innovation process in both top-down and bottom-up innovation projects that did not involve so called outside experts or outside expertise. Little attention has been paid to exploring the issues regarding those inexperienced internal change agents (e.g. administrators or teachers inside the institutions) who would like to set up innovation on a school basis without involving outside experts. There has been little examination of the factors that will affect their choice of change strategies and leadership styles, etc. In addition, many western researchers tend to be critical of top-down innovations and advocate the advantages of active participation by teachers. There is a little research on involving teachers’ active participation in some non-English speaking contexts, such as in Indonesia (Tomlinson 1990), Malaysia (Haye 1995), and Thailand (Haye 1995), or other research conducted by individual teachers on a very small scale (mostly in their own classroom). However, despite the growing importance of ELT in the Chinese-speaking world, the issues regarding the factors that will facilitate or inhibit bottom-up innovations located in a Chinese-speaking context have not been investigated to any significant extent. Since the Chinese-speaking context is one of the most populous cultures, it is necessary to investigate the ways in which bottom-up innovations are implemented in such a context.

In order to achieve more understanding of the issues raised above, this thesis
attempts to portray some innovation processes in a situation without intervention by outside experts, and in a specific non-western environment as they took place. It then focuses on the salient points related to ELT innovation on several levels, and examines the perspectives beyond language and classroom, as suggested by Holliday (1996). The aim is to fill the gaps discussed above by an attempt to investigate innovation from the viewpoint of an end user, rather than a change agent, to discover how other participants of end-user status interpret innovation in a Chinese-speaking context. Without the full provision of opinions from end users, what we have learned from the existing literature is far from complete, and therefore it is still not sufficient to demystify the innovation process and present comprehensive knowledge. This study also attempts to examine innovation implemented by its internal change agents, without involving outside experts who can provide adequate outside expertise. It aims to investigate the implementation issues that will significantly affect the mechanisms and the factors that will either facilitate or inhibit the success of innovation. Critically, this thesis intends to examine three types of innovation that were located in the same context and implemented on a school basis: one was initiated entirely top-down, one from both directions, and the other bottom-up. Consequently, we can explore the differences or similarities of mechanisms within the different types of innovation. It might be expected that success would be more likely in bottom-up innovations when implementers feel that they are implementing what they own.

The thesis includes eight chapters. In Chapter One, I present the meaning of innovation defined by some educational innovators and describe four major elements of innovation. Constraints that potentially inhibit implementation in educational innovations and the latest insights into innovation problems are discussed and explored. Thus educational issues in the area of curriculum development are presented in Chapter One, and in Chapter Two this is complemented by a review of theories for innovation
management derived from education, business, and management. I argue that certain features of institutions and organizations have to be addressed if change is to be successful (Morrison 1998: 148). Organization factors are closely related to the preferred type of innovation models, change strategies and leadership style, which either facilitate or inhibit change. Because any innovation will encounter resistance more or less, I also discuss ways of managing conflicts and discuss differences between them.

In Chapter Three I discuss the method adopted, which is ethnographic research giving a thick description of how the teachers participated in the ELT projects leading to innovation. Data were gathered from participant-observation, questionnaires, informal conversation and casual questioning, and documents (e.g. school reports, school newsletters, and the minutes of meetings). Chapter Four sets the scene for the case studies. First, the background of the wider educational system, e.g. the change of national policy and the need for system transformation, is presented. Then, the historical background and development of this private institution, i.e. its structure and culture, is traced.

In Chapters Five, Six, and Seven, I present three ELT innovation projects, giving a thick description of the innovation process in which participants at all levels attempted to implement innovation. The areas were teacher development, the integration of computers into the classroom, and the change of materials. The analysis of the innovation process includes three dimensions. The first dimension is to understand the nature of each innovation with reference to Bolam’s (1976) major characteristics of innovation, and relate the culture type to the choice of change strategies and leadership styles using Havelock’s (1971) models of innovation coupled with the theory of change strategies by Chin and Benne’s (1976) and the theory of leadership styles by Blanchard et al. (1985). These are well-established models, and have been widely used in the literature. The second dimension
is to explore the factors at different levels of the system that either facilitate or inhibit innovation with reference to Rogers' (1983) attributes of innovations, Dalin (1978) and Dalin et al's (1993) barriers to change, and Holliday's (1995) local rhythms. The third dimension is to examine whether organizational development would finally take place through primary innovations (Markee 1997) and investigate whether any significant changes would be produced, using the theories of innovation triangle (Markee 1994, 1997), Brickner's (1995) first-order barriers and second-order barriers to technology integration, and Wallace's (1991) two phenomena of experiential knowledge of a practitioner teacher, etc.

Drawing upon the results and analysis of the innovations, the study confirms a close relationship between an innovation and its context. Several contextual factors that affected the success of innovation were identified: the double centre-periphery, the hidden power structure, negative rhythms, communication barriers and four other barriers, and the economic orientation and other sociocultural factors. It was found that the inexperienced implementers under study (including the change agents and English language teachers) were under-informed and had inadequate knowledge of innovation and implementation. The innovation issues (e.g. capacity-building, two-in-one innovations, and attributes of innovation) that are essential to the success of innovation were absent from the implementers' conceptual world. Since they failed to understand the meaning of innovation, they simply implemented change at the level of first order change, but failed to achieve the larger process of curriculum development, i.e. second order change. In general, the outcomes showed that it is naïve to assume that success will be more likely in bottom-up innovations than in top-down innovations, without taking other equally important issues into account. In fact, both top-down and bottom-up innovations require the same favourable conditions to facilitate their success.
Chapter One  Innovation Issues

It has been widely noted over many years that the low degree of success of educational innovations is mainly caused by the failure of the innovators who were unable to make use of the extensive theoretical literature on innovation (Havelock and Huberman 1977; Barmada 1994). They also did not adopt the appropriate innovation strategies (ibid.). Both White (1987) and Barmada (1994) identify two areas of expertise in which all innovators should be equipped: an understanding of innovation issues and expertise in the management of innovation. Chapter One and Chapter Two review these in the two areas that are also the literature background to the three case studies presented in the later chapters. This chapter first looks at the area of the innovation issues as reported in the literature.

1.1. The meaning of innovation
Before we discuss the features of educational innovations, we should define the meaning of innovation. Failure to understand the meaning of innovation is thought to be one of the factors which hinder innovation. Fullan (1991) has stressed that change projects are unlikely to succeed particularly when participants 'do not have a clear, coherent sense of meaning about what education change is for, what it is, and how it proceeds.'

Miles (1964: 36) defines innovation as 'a deliberate, novel, specific change which is thought to be more efficacious in accomplishing the goals for a system'. Nicholls (1983: 4) defines an innovation as 'an idea, object or practice perceived as new by an individual or individuals, which is intended to bring about improvement in relation to desired objectives, which is fundamental in nature and which is planned and deliberate'. Delano et al. (1994: 489) define the meaning of an innovation specific to ESL as 'an informed change in an underlying philosophy of language teaching/learning, brought about by direct experience, research findings, or other means,
resulting in an adaptation of pedagogic practices'. Some writers stress the fundamental difference between innovation and change. For instance, White (1988: 114) defines change as occurring spontaneously without involving 'conscious planning or intention'. By contrast, innovation is defined as involving 'deliberate' alteration, and is distinct in that it results from deliberate change efforts that are intended to bring about new and enhanced practices (White 1988:114). Therefore, although all innovation involves change, not all changes are innovations.

1.2. Major elements of innovation

There are several elements that constitute an innovation. Pinar (1999) lists the four major factors in innovation described by Bolam (1976):

- the innovator system
- the innovation system
- the innovation process
- the innovation

1.2.1. The innovator system

The innovator system refers to the change agents who are implementing the change. Individuals who cause or facilitate change are often called change agents (Scileppi 1988). They act as catalysts for change and as a link between different participants (Kennedy 1988; De Lano et al. 1994). In general, there are two types of change agents. External change agents are people outside the institution, including consultants, evaluation teams and other experts recognized by the educational culture (De Lano et al. 1994: 491). They may encounter difficulties, such as lack of the institutional (or legitimate) power to force adoption (Kennedy 1987: 165; Markee 1997: 45) or incomplete understanding of core problems. On the other hand, they benefit from an image as guest experts either with better pedagogic knowledge or with more capability of handling language issues. Internal
change agents are people within the institution, such as administrators, teachers, etc. They are often strongly inspired by dissatisfaction in current situations and perceive the core problems correctly, but they may have incomplete knowledge of the physical and intellectual materials available and lack experience in management of innovations. They often have legitimate power to force change, but it is doubtful that such forced change will be enduring (Kennedy 1987: 165). In the course of the innovation process, change agents play an important role in effecting innovation and are believed to be ‘crucial in the process of change’ (Pinar 1999: 70), as effective change agents will surely facilitate innovation. Therefore, an effective change agent needs to realize a series of responsibilities and be able to fulfil them successfully. As early as 1971, Gross et al. (1971 in Pinar 1999) outline several responsibilities that a change agent needs to take:

1. to plan, support and monitor the innovation process
2. to clarify teachers’ definitions of their own role
3. to provide access to training for teachers' new role
4. to ensure that necessary materials are available
5. to modify organizational arrangements
6. to devise feedback mechanisms

However, the above responsibilities are still insufficient. Because schools are organizations in which different teachers and administrators may view teaching in entirely different ways. White (1987) indicates that the administration and teachers in an institution usually have different concerns. Different parties in the same school may have different goals for or interests in a school. When a new practice is introduced to the institution, these differences could become sources of conflict. For instance, some teachers may perceive the learner-centred approach to teaching as helpful for learners’ autonomous learning, but some administrators may regard this approach as deviant. Therefore, an effective change agent also needs to take
responsibility for resolving conflicts arising from the innovation process. Hence conflict management is an essential skill for change agents. This will be further discussed in Chapter Two.

1.2.2. The innovating system
The innovation system is meant to be the users, receivers, adopters or clients who are adopting an innovation. The different psychological profiles of adopters affect implementation (Markee 1997): it seems that some people are more naturally committed to change, but others do not want anything to do with change (Morrison 1998: 122). The innovation adoption curve (Huberman 1973) illustrates the diffusion of innovation among four types of adopters: early adopters, early majority, late majority, and laggards. Based on the research work (Huberman 1973, Cooper 1982, and Rogers 1983, 1995 in Markee 1997), Markee (1997: 58) says that the diffusion process tends to begin slowly; it then suddenly accelerates and finally slackens off (see Figure 1.1. below). Only a small number of adopters adopt a change at a relatively early stage. In contrast to early adopters, a small number of laggards resist a change even after a certain period of implementation. Several characteristics of early adopters, identified by Markee (1997) are summarized below (Table 1.1.). Compared to early adopters, laggards tend to display opposite characteristics.

Figure 1.1. The innovation adoption curve
(based on Cooper 1982 in Markee 1997)
Table 1.1.

Characteristics of early adopters (Markee 1997: 58)

<table>
<thead>
<tr>
<th>Characteristics</th>
</tr>
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<tbody>
<tr>
<td>1. They tend to travel widely and are often well-educated,</td>
</tr>
<tr>
<td>2. They tend to seek out and be open to new ideas and tend to have a high degree of exposure to mass media</td>
</tr>
<tr>
<td>3. They often have extensive contacts with other people and tend to be personally or professionally close to change agents;</td>
</tr>
<tr>
<td>4. They are often willing to take acceptable risks and are able to tolerate relatively high levels of uncertainty.</td>
</tr>
</tbody>
</table>

The implication from the innovation adoption curve is that people do not immediately adopt an innovation, so change agents have to be aware that 'it always takes longer to implement than expected' (Markee 1997: 58). Change agents have to be patient and not become discouraged if there are only few adopters at the beginning of the innovation. Ideally, early adopters are said to serve as role models. It is important for change agents to identify the early adopters so that 'they pave the way for the early and late majority to follow suit' (Markee 1997: 59). However, although early adopters may help influence the others (e.g. laggards), Markee also indicates that they still cannot successfully persuade other adopters to change their attitude if the innovation proposed still cannot prove to be more effective than the existing practice or it is not closely relevant to the adopters' felt needs. This will be illustrated in our case study in Chapter Six.

1.2.3. The innovation process

The innovation process can be divided into different stages. Fullan (1991: 47-48) identifies three broad phases:
• Phase I - initiation
This phase consists of the process that leads up to a decision to adopt or proceed with a change.

• Phase II - implementation
This phase involves the first experiences of attempting to put an idea or reform into practice.

• Phase III - continuation
This phase refers to whether the change gets built in as an ongoing part of the system or it disappears because of adopters’ decisions.

The duration of each stage varies, depending on the characteristics of the innovation and the context where it is going to be located. Like Gross et al. (see 1.2.1.), Morrison (1998: 20) suggests that effective change agents have to plan different tasks needed for each stage of the innovation, such as the roles and tasks of participants and the criteria for evaluating the success of each stage, etc. However, because ‘the innovation process is a highly complex phenomenon’ (Markee 1997: 172), there have been many innovation problems arising from the complexity of the innovation process. These impeding problems will be discussed in 1.3.

1.2.4. The innovation
The innovation refers to the proposed change to be implemented. In the literature, curriculum developers have proposed changes on many levels, such as changes in teaching materials, teaching technology, and teaching procedure, etc. New materials are often used as a way of introducing new practice. They are introduced to motivate learners and train them in new skills. For example, Goss (2001) used children’s interests combined with children’s literature to make learning easier. Such materials were selected from an area where children already have a developed schemata or
knowledge base, so that they could excite children. There is also increasing importance of new technologies as a way of innovation – things like offering new types of activities, better motivation, etc. For instance, Quick and Lieb (2000) presented a case study of how three professors at Towson State University in Towsan, Maryland, used computer technology to develop a web-based project that allowed students to collaborate across disciplines.

Paradigm shifts from a traditional practice to a new one are also a popular issue in many different field of education. Change in teaching procedure indicates a change of principles underlying effective teaching and learning. For example, Harris et al. (2001) attempted to introduce problem-based curricula into the classroom. Their study highlights the differences in teaching procedures between a problem-based approach and more traditional approaches and how such differences affected student outcomes in mathematics. The theoretical change inevitably caused changes on lots of other levels, in terms of roles of learners, teachers and materials, etc. In the ELT context, the contrast between communicative language teaching (CLT) and traditional teaching (TT) is summarized by Nunan and Lamb (2001 : 31) in Table 1.2. below. Several approaches associated with CLT are advocated by Breen (1987a, 1987b), Candlin (1987), Clarke (1991), Long and Crookes (1992), and Kumaravadivelu (1993a, 1993b), etc, and intended to improve learner outcomes.

Although some curriculum developers found significant effects from proposed changes (e.g. Budd and Wright 1992; Thein 1994), not all proposed changes are successful. Markee (1997) reminds us that innovation is a highly complex phenomenon and always constrained by several factors. Bowers (1983:99 in Barmada 1994) points out the achievement and underachievement in many innovation projects due to the complexity of the innovation process. As Bowers (ibid.) describes this situation:
It is common to find at the end of such projects a shared sense of both achievement and under-achievement. While much has been done, much remains to be done, and the outcome of a project is never precisely what was predicated at its inception.

Therefore, it is necessary to investigate the innovation process and address the key factors that are known to impact on the likelihood of success (Fullan 1992: 57). Only after we identify these key impeding factors and understand how they affect the success of innovation, will we be able to generate principles for successful implementation.
Table 1.2. Changing views on the nature of the traditional approach and the CLT approach (Nunan and Lamb 2001: 31)

<table>
<thead>
<tr>
<th>Teaching</th>
<th>Traditional</th>
<th>CLT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theory of language</strong></td>
<td>Language is a system of rule-governed structures hierarchically arranged.</td>
<td>Language is a system for the expression of meaning: primary function-interaction</td>
</tr>
<tr>
<td><strong>Theory of learning</strong></td>
<td>Habit formation; skills are learned more effectively if oral precedes written analogy not analysis</td>
<td>Activities involving real communication; carrying out meaningful tasks and using language that is meaningful to the learner promote learning.</td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>Control of the structures of sound, form and order, mastery over symbols of the language; goal-native speaker mastery</td>
<td>Objectives will reflect the needs of the learners; they will include functional skills as well as linguistics objectives.</td>
</tr>
<tr>
<td><strong>Syllabus</strong></td>
<td>Graded syllabus of phonology, morphology, and syntax. Contrastive analysis</td>
<td>Will include some or all of the following: structures, functions, notions, themes and tasks. Ordering will be guided by learner needs.</td>
</tr>
<tr>
<td><strong>Activities</strong></td>
<td>Dialogues and drills; repetition and memorization; pattern practice</td>
<td>English learners in communication; involve processes such as information sharing, negotiation of meaning and interaction</td>
</tr>
<tr>
<td><strong>Role of learner</strong></td>
<td>Organisms that can be directed by skills training techniques to produce correct responses.</td>
<td>Learners as negotiator, interactor, giving as well as taking.</td>
</tr>
<tr>
<td><strong>Role of teacher</strong></td>
<td>Central and active; teacher-dominated method. Provides model; controls direction and pace.</td>
<td>Facilitator of the communication process, needs analyst, counsellor, process manager</td>
</tr>
<tr>
<td><strong>Role of materials</strong></td>
<td>Primarily teacher oriented. Tapes and visuals; language lab often used.</td>
<td>Primary role of promoting communicative language use; task based, authentic materials.</td>
</tr>
</tbody>
</table>
1.3. Problems raised in project implementation and sustainability

This section examines problems raised in project implementation and sustainability. The literature reveals that many problems dominate educational innovations. It is also found that these problems recur in different studies. For instance, Pink (1989: 22-24) reviewed four change projects and found several barriers to the success of innovation that were common to all projects. Some of them are listed as below (Table 1.3.):

Table 1.3. Barriers to innovation effectiveness (Pink 1989 in Fullan 1992)

- an inadequate knowledge of implementation, including too little time for teachers to plan for and learn new skills and practices.
- lack of sustained central office support and follow-through
- underfunding the project, or trying to do too much with too little support
- attempting to manage the projects from the central office instead of developing school leadership and capacity
- lack of technical assistance and other forms of intensive staff development
- lack of awareness of the limitations of teacher and school administration or knowledge about how to implement the project
- the turnover of teachers in each school
- too many competing demands or overload
- failure to address the incompatibility between project requirements and existing organizational policies and structures.
- failure to understand and take into account site-specific differences among schools.

Fullan and Hargreaves (1991: 22) have also listed several reasons responsible for the failure of most projects as presented in Table 1.4. below.
Table 1.4. Reasons for the failure of most projects (Fullan and Hargreaves 1991)

- The problems themselves are complex, and not easily amenable to solutions given the resources at hand.
- Time lines are unrealistic because policy-makers want immediate results.
- There are tendencies toward faddism and quick-fix solutions.
- Structural solutions (e.g. redefining the curriculum, increasing assessment and testing) are often preferred, but they do not get at underlying issues of classroom teaching and teacher development.
- Follow through support systems for implementing policy initiatives are not provided.
- Many strategies not only fail to motivate teachers to implement improvements but also alienate them further from participating in reform.

The problems above arising from the innovation process show that the success of innovation requires a high level of expertise in what causes innovation issues and how to manage them. It is not the concern of this thesis to investigate each of the above barriers to innovation effectiveness. However, I would like to discuss four main areas around which those impeding problems seem to evolve: failure to take sociocultural factors into consideration, lack of changes in belief and classroom behaviour, first order/second order barriers to technology integration, and lack of the institutional capacity to innovate. Following that, latest insights into innovation problems reported in the literature will be presented.

1.3.1. Failure to take sociocultural factors into consideration

Many externally-imposed projects fail because of the incompatibility between project requirements and existing organizational policies or structures. The incompatibility between the innovative practice and the host
institution promotes adopters’ resistance towards change. Karavas-Doukas (1995: 55) indicates,

If innovations are to be accepted and eventually used in classrooms, they must be judged by teachers as being practical/feasible in terms of time, resources and organizational constraints, relevant in terms of teachers’ perceptions of the needs of their students and acceptable in terms of their own teaching style.

Williamson and Schuller’s study (1996) suggests that resistance will occur when the project requirements and the existing resources and structures are incompatible. In this study, a small group of experienced teachers were asked by the education ministry to design computer-based materials for mathematics teaching in upper secondary technical schools for students aged 15-19 in Austria to improve learning. The result showed that able students enjoyed working with the computer materials, but the less able found the materials more demanding and did not perform well. Although the introduction of new materials and technology had a positive effect on some students, it is doubtful whether this innovation would be sustainable when it failed to improve the learning of some other students. In reality, most schools have learners of mixed levels. When the school lacks resources (e.g. insufficient funds or inadequate expertise) and is unable to work out a variety of computer-based materials to match the learning needs of all levels, it is expected that the innovation will finally withdraw. Swales’ report (1980 in Barmada 1994) also shows that any new practice is often constrained by the existing institutional policy. Swales gives an example of a course at Khartoum University which aimed to teach the students how to write. Because of the existing institutional policy in which scientific reports were assigned only 10% of the mark in the student’s science course, students did not perceive this writing course as important. Consequently, students wrote only token reports for this course and failed to improve their writing skills.
In addition to the institutional constraints as seen above, there are many other factors affecting the success of innovation. Innovation issues are never limited to those at the classroom level or institutional level. In reality, many classroom/institutional constraints are interrelated with the wider environments at different levels. If a society is viewed as a system, there are many sub-systems underneath, in terms of cultural values, political orientations, administrative factors, educational policies, institutional structures, and classroom factors.

Kennedy's (1988) diagram explains the interaction between the innovation and the interrelating sub-systems of a system. In this diagram, classroom innovation is situated in the centre and surrounded by institutional, educational, administrative, political, and cultural sub-systems in the outer circles. Innovation at the classroom level is always affected by its outer sub-systems surrounding it. Kennedy's diagram suggests that innovation issues occurred in the classroom and the institution cannot be understood without referring to the wider environments at the macro levels. In other words, 'multiple sociocultural systems potentially interact to constrain the classroom innovation' (Markee 1997: 55).

Holliday (1994a) also addresses the issue of how sociocultural constraints affect course design. When these conflicting factors become a hindrance to innovation, any project is difficult to implement or sustain. He argues that conflicts that are set up between the project and the established host educational environment can result in project failure resulting from 'tissue rejection'. In other words, a 'tissue rejection' phenomenon will take place 'when the implant (i.e. the innovative practice) does not survive as an integral part of the host institution, once project support is taken away' (Holliday 1994a:134). Tissue rejection is taken from medicine to describe failure in organ transplant, and Hoyle (1970:2 in Holliday 1994a : 134) uses
it to describe what happens when curriculum innovation does not become an effectively functioning part of the system. Pacek's study is a case to exemplify Kennedy's diagram and illustrate the 'tissue rejection' phenomenon. Pacek (1996) reports a one-year INSET program for Japanese secondary school teachers of English (JST) at the University of Birmingham. One of the main objectives of the course was to expand Japanese teachers' knowledge of theory underlying the CLT approach and their repertoire of teaching techniques. While taking this course in Britain, most Japanese participants found it interesting and innovative. However, such positive comments changed after the participants returned to Japan. The communicative approach introduced in the course was not implemented by some participants when they returned to Japan. Participants' non-implementation was caused by the differences between British and Japanese educational/cultural traditions. The CLT approach encountered social and educational conflicts when it was applied in Japan where the traditional role of learners was set as passive receivers. In addition, Japanese students needed to pass examinations that had no communicative components, so CLT was considered incompatible with their existing needs. This study illustrates that innovation projects will finally fail when their course designers do not consider the likely problem of tissue rejection and take into account the socio-cultural constraints beforehand. It also suggests that any successful method innovation also has to go along with testing innovation. Tomlinson's study (1990) is another example illustrating that the success of innovation is always constrained by those sociocultural constraints. The implementation of the PKG approach in Indonesia attempted to promote learner-centeredness, task-based learning. Those learner-centred, task based programs are based on a belief that learners themselves should exercise their own responsibility in the choice of learning objectives, content and methods (Brindley 1984; Nunan 1988). The notion of independent learning is appealing to the societies (e.g. most English-speaking countries) where learners' contributions to the learning
process are strongly encouraged. However, the new approach encountered cultural and educational conflicts when it was applied in Indonesia where the new role of learners was incompatible with the Indonesian culture and its educational value.

An understanding of the innovation issues at the macro levels uncovers the factors responsible for the failure of many teacher programs that tend to adopt a direct transfer from other settings (mostly from western countries). They attempt to equip teachers with 'received knowledge' (Wallace 1991: 14), i.e. theories and skills which are widely accepted as being part of the necessary intellectual content of the profession. However, they often encounter difficulties in implementation and sustainability when they fail to address the sociocultural constraints and get closer to teachers' 'real worlds' (Holliday 1994a: 198). The failure of those training schemes, as seen in the examples above, shows that educational innovation is no longer limited to what has happened inside the classroom or which skills teachers should have mastered from a teacher program. To increase the likelihood of the success of innovation, it is necessary to shift our attention from the description of course design to the examination of the wider context in which an innovation is going to be located.

However, the emphasis on the sociocultural constraints does not intend to deny the effectiveness of those teacher programs that provide 'received knowledge', as they do equip teachers with necessary skills, knowledge, and attitudes for successful implementation of single innovations. Classroom investigation shows that there is evidence that such programs are effective. Staffings' study (1989), for instance, proved that this kind of teacher program did equip teachers with necessary skills to improve student reading scores as intended. The results in Staffings' study demonstrate the power of a carefully designed staff development strategy for implementing single innovations. Nevertheless, due to globalisation, when many innovations
have been carried abroad to different sociocultural contexts, we cannot implement them without taking the sociocultural factors into account before we put them into practice, as discussed above.

1.3.2. Lack of changes in belief and classroom behaviour
To achieve real change in classroom practice relies on change in teacher’s belief and behaviour. Markee argues that ‘innovation must also engage teachers in the more abstract tasks for developing their methodological skills and changing their ideas about what constitutes good teaching’ (1997: 54). His notion of ‘innovation triangle’ describes the reciprocal relationship among changes in materials, methodological skills, and pedagogical values (see Figure 1.2. below). When teachers are asked to try out a new practice or materials, they also have to be engaged in a process of changes in their teaching values. In this way, ‘change agents can use syllabus design and materials development by teachers as a convenient entry point into the larger process of curricular innovation’ (Markee 1997 : 54). However, it is not always so easy to change teachers’ deeply-rooted belief and their practice. Many projects do not produce real change because their project designers do not dedicate change efforts to make the innovation triangle reciprocal. They fail to realize that changes at one point of the innovation triangle need to be accompanied by changes at other points of the triangle.

Unchanged classroom behaviour (e.g. role behaviour), with the use of new materials, indicates the problem of the ‘innovation triangle’ (Markee 1997). The failure reported by Karavas-Doukas (1995) is a case which exemplifies such a problem. Karavas-Doukas (1995) gives a report in which the curriculum developers in Greece tried to implement the communicative approach to English teaching/learning using textbooks containing communicative components. However, Karavas-Doukas indicates that teachers’ lack of understanding of the methodological principles underlying the new materials was one of the impeding factors that finally led to the
non-implementation of this innovation. The Greek teachers had changed to new materials, but they tended to implement the intended communicative activities as controlled grammar practice exercise and did not create the opportunities of real communication in their classroom. They did not realize the new role of teachers and students associated with the CLT approach, so they still acted as knowledge-transmitters, rather than facilitators. This study illustrates that teachers will not really comply with the principles and structure as provided in the textbook they use. It also challenges the claim by Hutchinson and Torres (1994) who have a positive view of the effectiveness of textbook as change agents.

Karavas-Doukas' report also illustrates a common problem in many innovation projects – the implementation of first order change (Cuban 1988: 342) without second order change (ibid.). The outcomes showed that the teachers and students had changed to a new method and materials, i.e. first order change. However, the role behaviour remained unchanged, which indicates that the Greek teachers failed to implement second order change. First order changes replace what is currently done, 'without disturbing the basic organizational features, without substantially altering the way that children and adults perform their roles' (Cuban 1988: 342). Second order changes are changes that seek to alter the fundamentals of an organization, including new goals, new structures, and new roles of learners, teachers, and materials (ibid.). In reality, it is not so easy to achieve second order changes. Kerr (1996: 24) points out the difficulties of second order changes, for they require 'a radical shift in both teaching style and the teacher's vision of what classroom life is all about'. However, the literature stresses that little innovation will take place when there is only first order change but no second order change. As indicated in the very beginning of this chapter, although all innovation involves change, not all changes are innovations (1.1.).
Thus, it is important that if an innovation is to succeed, change agents need to examine the reciprocal relationship of the innovation triangle and ensure that both first order change and second order change do take place.

Figure 1.2. Innovation triangle (Markee 1997)

Changes in pedagogical values

Changes in teaching materials

Changes in methodological skills

1.3.3. First order and second order barriers

The orders of change are also significant in technological innovation. Brickner (1995) develops Cuban's notion of two orders of change and uses the terms first order barriers and second order barriers to describe negative forces for innovations in integrating technology into the curriculum. These barriers are likely to challenge the adoption of technology by teachers (Brickner 1995; Ertmer 1999). In Brickner's definition, the first order barriers are the obstacles that are extrinsic to teachers, including lack of access to computers and software, insufficient time to plan instruction, and inadequate technical and administrative support. To resolve first order barriers requires sufficient support from the institution to provide teachers with adequate resources and training. For instance, Grabe and Grabe (1998: 113-114) suggest that the institution should create several opportunities to increase teachers' expertise in CALL, such as attending
conference, taking a class or workshop, browsing through magazines for educators, and communicating directly with software companies, etc.

The second order barriers are described as being intrinsic to teachers, including beliefs about teaching/learning, beliefs about computers, established classroom practices, and unwillingness to change, etc. To resolve second order barriers requires challenging one's belief systems and one's established practices. For instance, in the CALL classroom, the traditional roles of teachers and learners in which teacher-talk is at the centre in the whole classroom no longer exist. Teachers are required to change their established practices including teaching methods, management styles, and assessment procedure. They are also required to design activities to encourage students' autonomous learning.

The need for involving changes in adopters' beliefs in technology integration and the complexity of this integration process are well illustrated in the account by Fullan (1992). He gives an example of a large-scale project implementing the widespread use of microcomputers in classrooms and schools in Ontario, Canada. This program focused on the integration of computers into the total learning experiences of students, including three dimensions of change for the teacher in the classroom:

1. The use of new hardware and software materials
2. The use of new activities, behaviours or practices

Fullan indicates that the use of new materials (hardware and software) is the most obvious because it is concrete and tangible. One can really see the hardware and software materials being used in the classroom. However, Fullan stresses that the second and third dimensions are much more fundamental and problematic because they involve changes in what teachers
do (practices) and think (beliefs). As mentioned earlier, it is not so easy to change teachers' belief system and habitual behaviour. Most teachers are inclined to neglect the last two dimensions, which indicates the core issue of technology integration and suggests that the full implementation of technology integration is a highly complex process. Both Fullan (1992) and Brickner (1995) indicate that when teachers are asked to integrate computers into the classroom, they have to not only get familiarised with the hardware and software, but also adapt themselves to the new role, new management styles, and new assessment procedures. Failure to fulfil such challenges will pose obstacles to the integration process. Their research highlights the need for change agents who have to be adequately professional not only in the use of technology, but also in integrating technology into the curriculum. As mentioned by Sergeant (1999: 83), professional change agents who are able to embed CALL in the curriculum and understand how to manage the innovation will be essential to the success of CALL innovation.

1.3.4. Lack of the institutional capacity to innovate
The literature reveals that most top-down projects fail because their school administration and teachers lack the 'institutional capacity to innovate' (Huberman 1992: 7). It is common that most adopters have an inadequate theory of implementation (see Table 1.3. in 1.3.). These projects are usually passed down to the school administration, and finally reach the end users, i.e. teachers and students. Many projects are introduced rapidly, with little thought or time to consider implementation. However, the curriculum developers at the ministry level tend to neglect the issue of whether the adopters have the capacity to implement the proposals. During the process from adopter A to adopter B or C, the issue of 'capacity building' indicated by Fullan (1992: 56) is often neglected.

For instance, Little (1990) has reviewed one mentoring scheme and found that its failure was predominantly caused by the failure to develop the
implementers' capacity to implement this scheme. In the course of implementation, this scheme did not allocate resources to support the administrators and teachers who would implement mentor roles. In the course of pre-implementation, training for mentors only focused on general process skills, rather than on their expertise. Due to lack of the development of change capacity, the mentoring scheme failed to succeed. The problem of change capacity will be also presented in our case studies in the later chapters.

After having reviewed the problems reported in the literature, now I am going to explore the latest insights into innovation problems as discussed in the literature.

1.4. Latest insights into innovation problems
There are many innovators and researchers attempting to achieve new insights into the innovation problems. It is noted that the attention that used to focus on developing innovative approaches, methods or technology has moved into project implementation, project sustainability, and school improvement. The following sections establish three current perspectives that are considered to minimise innovation problems and enhance maintenance: enhancing teacher programs, taking notice of local rhythms, and implementing change as organizational development.

1.4.1. Enhancing teacher programs
This section discusses the importance of enhancing teacher programs to facilitate innovation. It first looks at teacher programs designed to help teachers develop experiential knowledge by reflecting on knowing-in-action. Then, teacher research is discussed, since it seems likely to provide powerful effects on the success of a bottom-up style of innovation.
Innovations to support change among teachers are important for successful implementation. Many teacher development programs are prescribed top-down and intended for the implementation of a new practice or a new teacher role to improve learner outcomes, and as the above discussion of CALL shows, they are often needed. However, such prescribed projects tend to perceive teachers as passive receivers of so called 'received knowledge' (see 1.3.1. above). Consequently, as discussed in 1.3.1, they are unable to succeed in changing teachers' deeply-rooted belief and habitual behaviour because teachers do not passively accept innovative ideas once they have been informed about them. Therefore, in addition to received knowledge, Wallace (1991: 14) indicates the other kind of professional knowledge that teacher education should include – i.e. experiential knowledge.

1.4.1.1. Experiential knowledge: knowing-in-action
With reference to Schon (1983), Wallace (1991: 13) defines the experiential knowledge of a teacher as deriving from reflection and knowing-in-action. Teachers develop knowing-in-action by practice in their profession, and then need the opportunity to develop their reflection capability by reflecting on that knowing-in-action (Wallace 1991: 15). The process of reflection on knowing-in-action is considered to inspire a bottom-up style of innovation initiated by teachers, the implementation of which will have teachers take more responsibility for the policies and practices (Fullan and Hargreaves 1991). Innovation will be more likely to be implemented when teachers feel that they are implementing what they own (Fullan 1992; Markee 1997).

Knowing-in-action refers to the phenomenon in which a practitioner teacher gains experience and tacit knowledge by practice of the profession. However, many practitioner teachers do not express their dissatisfaction with classroom practice in a conscious application of principles, but in term of feeling. They tend to rely solely on their daily experience and make
judgements that seem to be unprincipled and unreflective. For example, a practitioner teacher wants to introduce the task-based activities because they are expected to have learners exercise their own responsibility in the choice of learning objectives and develop their independent learning. When these activities are put into practice, the teacher may have negative feedback because some learners are very dependent on the teacher and do not want to take responsibility to complete tasks. Learners may complain about the classroom chaos caused by self-directed learning objectives and consequently they are not enthusiastic about this type of classroom activity. If the teacher does not use some systematic techniques to develop a focused observation and reflect critically on available data, s/he may only see the problem from a simple perspective and finally comment that 'task-based activities do not work with my students'. As a result, s/he may make no effort to produce a significant change. Therefore, from the perspective of innovation, knowing-in-action is not enough to make a teacher accommodate change, it needs reflection as well.

1.4.1.2. Experiential knowledge: reflection
Not all teachers are naturally reflective (Roberts 1999). Wallace (1991) argues that teachers should not rely on experience alone and leave their feelings of dissatisfaction unexplored. They need to reflect on their professional performance, particularly when it goes well or badly. They need to think about what to avoid and what to repeat in the future. Reflection will take place when teachers examine a classroom problem and recall relevant knowledge (or experience) that may help them with evaluation of the problem. Such a process will help teachers re-consider their existing practice and thereby have the likelihood of changing their belief. As stressed by Wallace (1991 : 54), 'development implies change, and fruitful change is extremely difficult without reflection.'
Jarvis' report (1992) exemplifies the effectiveness of reflection through diary-writing that helped teachers generate new meaning from their daily teaching and thereby changed their classroom performance. Roberts' (1999) study gives a more detailed report on how reflection has a powerful effect on developing teachers' different perceptions and changing their practice. Four participants were required to write a diary for the purpose of structured reflection, so that they would develop different perspectives on writing and consequently make a significant change. The outcomes showed that two teachers found diary-keeping useful for them to reflect on their classroom behaviour. By contrast, the other two teachers did not gain reflection as much as from diary keeping. One of them used her diary as a place to note problem areas at meetings, just reading aloud from it. Because this teacher did not reflect 'critically' on the problems, she could not exploit the benefit of diary writing to investigate her own classroom and thereby explore ideas and make connection as intended. The other one did not even write a word in her diary to investigate the classroom and use it for reflection. Roberts found that these two teachers were inclined to apply the knowledge accumulated from their teaching experience to make unreflective judgements and decisions—i.e. knowing-in-action, without reflection. They could not probe the questions such as why a specific method succeeded or why it failed. By comparison, the other two teachers who were engaged in structured reflection were more inclined to change their daily perceptions of teaching/learning and more willing to generate different perspectives and eventually change their classroom behaviour. The above studies all highlight the importance of developing teachers' reflection capability in teacher programs.

Because reflection helps teachers identify their own classroom problems and seek solutions, Wallace (1991: 56) says that the process of reflection should be formalized and the classroom teacher should become a researcher. Nowadays, the increasing importance of teachers' contributions to innovation
also highlights the value of teacher research. As a result, the implementation of the new teacher role as a teacher researcher has become essential in a bottom-up style of innovation.

1.4.1.3. Teacher research

Fullan and Hargreaves (1991: 22) have indicated that ‘Educational change that does not involve and is not supported by the teacher usually ends up as change for the worse, or as no real change at all’. To gain support from teachers, it is necessary, as mentioned in 1.3.1, to respond to teachers’ ‘real worlds’. Therefore, teacher research, i.e. action research, is perceived as a way in which teachers can become aware of their own institution and bring the projects proposed closer to their real worlds, as it represents ‘a direct response to the social, political and cultural moment’ (Berlin 1990: 9 in Halsall 1998: Preface). Teacher research requires teachers’ being reflective. Its function is to facilitate the reflection, and in this way provide an effective method for improving professional action (Wallace 1991). It involves the collection and analysis of data related to some aspects of teachers’ classroom practice, so teachers can ‘reflect’ on what they have discovered and apply it to their classroom action. Teachers attempt to change their classroom performance to a new practice that they have generated and perceived as compatible to their own real worlds. Therefore, the process of teacher research helps teachers make a change not only at the level of first order change, but also at the level of second order change (see 1.3.2. above). Such a process is perceived as a bottom-up style of innovation and considered to be powerful for teacher development.

There is evidence that teacher research successfully affects teachers’ behaviour and belief. For instance, Ho and Crookall (1995) investigated how a research program would help participants develop research skills and reflection capability and provide participants with the opportunity to generate and explore ideas, make connections, argue, and question, and in this way
change their teaching belief and behaviour. They embedded a research program into a teacher preparation program in a university in China where teachers’ research capability had been largely neglected. The results revealed that the participants who took a research program reflected on their practice more effectively than those who did not. Most importantly, it was observed that the participants with research training were more likely to change their classroom behaviour towards a new practice than the ones without.

Fennema and Carpenter (1996) also examined changes in the beliefs and instruction of 21 primary grade teachers over a 4-year period in which the teachers participated in a CGI (Cognitively Guided Instruction) teacher development program. They found that a specific research-based model did help the teachers make a significant change in the teacher role from simply demonstrating procedure to children to helping children talk about their mathematical thinking and engage them in problem-solving. This research-based model helped the teachers realize another way of teaching mathematics to children, which seemed to be more interesting and effective than the established practice. As a result of changes in teachers’ belief, there were changes in their instruction that were directly related to changes in their students’ achievement. This is another example to illustrate the effectiveness of a bottom-up style of innovation through teacher research.

As discussed so far, teacher research is regarded as 'a powerful form of staff development' (Rose in Burns 1999: 15) and often 'successful in the long run' (Bassey 1998: 93). We can say that teacher research has two positive effects on the success of a bottom-up style of innovation. First, it serves as a strategy to foster teacher ownership. Through a series of self-inquiries about what the problem was in class, why it happened, and what alternatives are available to solve it, teachers carry out a change generated from their own classroom, rather than being imposed externally. Therefore, teacher
research has been proposed as an 'empowering procedure' (Wallace 1998: 17), as it is 'more under teachers' own control and more relevant to the classroom' (Wallace 1991: 18) and 'enables people to own the change' (ibid.). As mentioned earlier, innovation will be more likely to be implemented successfully when teachers feel that they are implementing what they own.

Secondly, teacher research can serve as a strategy to resolve pedagogical problems teachers are faced with. It seems that the appropriateness of methodology is best judged by sensitive insiders, so teachers can diagnose more precisely what has really happened in their classroom and look for more feasible solution than anyone outside the classroom. As Carter (1998) points out, to effectively resolve pedagogical problems, it is necessary to change the role of teachers from passive receivers of top-down policies into active researchers.

1.4.2. Taking notice of opaque local rhythms

In addition to teacher research that is expected to respond to the cultural parameters within teachers' institutional and educational environment, there is another way to uncover the contextual cultures surrounding teachers in order to get projects adopted locally - i.e. taking notice of local rhythms.

Holliday (1995) argues that curriculum developers from outside are often selected for trainers, making presentations at the seminar, so the problem of implementation surrounding hand-over projects is predominantly caused by the project designers' lack of local knowledge. In his study of a seminar for black South African secondary school teachers, Holliday (1995) highlights the existence of 'local rhythms' of a host organization by which it goes about its daily life, in contrast to the rhythms of expatriate experts. He defines 'rhythm' as 'the timing and type of stages in the way people go about daily tasks' and uses it to describe the local real world (ibid: 65). He identifies
the differing rhythms of organizing a meeting between the host institution (black South African teachers) and the expatriate institution (British experts), as summarized below (Table 1.5.).

Table 1.5. Comparison of two types of rhythms (based on Holliday 1995)

<table>
<thead>
<tr>
<th>Expatriate experts (British experts)</th>
<th>Host institution (black South African teachers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two weeks before sends memos to all parties, books rooms and arranges for refreshments. One week before telephones all parties to confirm and checks all arrangements. Thirty minutes before visits room for last minute check. Arrives at the meeting a little early to ensure on-time start. Comments on latecomers and asks every two minutes “shall we start now or shall we wait a few minutes”. Announces when refreshments will be served and the length of break.</td>
<td>Keeps regular “social” contact with key people, including those who allocate rooms and provide refreshments. One week before sends memos to all parties and books room. Two hours before arranges refreshments. Times arrival to be with the majority so as not to appear “pushy”. Starts the meeting when the time seems ripe. Allows refreshments when time seems ripe.</td>
</tr>
</tbody>
</table>

Table 1.5. shows that the two groups appear to have different ways of organizing events into a time scale, which reflects their different priorities. It is very difficult for one party to give up its own way of doing things and adapt itself to a different one. Holliday indicates that the expatriate rhythms often do not ‘blend with’ (ibid: 65) the local ones, and the project finally becomes ‘so much an expatriate project that it could never be repeated or
developed' (ibid : 58). Expatriate experts often attempt to challenge the local rhythms, in a belief that they can change them. Such an attempt will endanger implementation and sustainability. Holliday stresses that only when the local rhythms are allowed to ‘take the lead of the project’ (ibid.), will the project be sustained. He argues that local rhythms are regarded as social appropriateness and they will provide opportunities for sustainability after the expatriate experts withdraw. Therefore, to get the project adopted locally, expatriate experts should make efforts to adapt themselves to these local rhythms, rather than attempt to impose their own rhythms on the local institution.

However, local rhythms are characteristic of opacity, so people outside the institution cannot perceive them easily (Holliday 1995). Expatriate experts would not be able to identify what the local rhythms are within a short period of time, which will lead to ‘the missing of opportunities for getting project action adopted locally’ (ibid: 65). This weakness suggests that it is necessary for external change agents to cooperate with the early adopters (1.2.2.) and seek their help to identify what local rhythms are and adapt the project to fit into teachers’ real worlds. The implication is that it is important to identify such local rhythms because they seem to critically affect the smoothness of the implementation process. One cannot judge whether rhythms in one setting are better than those in another, but should have the understanding of whether or not those specific local rhythms can be allowed to take the lead of the project to facilitate innovation.

1.4.3. Implementing change as organizational development

The concept of change as organizational development is well described in Markee’s two-in-one innovations: primary innovations and secondary innovations (1997; see Table 1.6. below). Markee relates the dimension of organizational development to ‘secondary innovations’ in contrast to ‘primary innovations’, i.e. changes in teaching (and/or testing materials),
methodological skills, and pedagogical values (ibid: 53). In the dimension of primary innovations, innovation intending to introduce new materials, new teaching procedure, new teacher roles, or technology, etc. will also involve changes in skills and values. Markee argues that primary innovations cannot be achieved without the implementation of secondary innovations. Change agents have to not only promote the development of primary innovations, but also develop secondary innovations to 'enhance the transformational capacity of the host organization to support primary innovations' (ibid: 172). The function of secondary innovations is to enable primary innovations. Secondary innovations represent the institutionalisation of secondary administrative and academic innovations. They are projects of 'ongoing organizational development by the change agent' (ibid.). Examples of academic innovations include a teacher training mechanism. Examples of administrative innovations include an effective communication mechanism (e.g. orientations, staff meetings, computer technology), or any other supporting resources. Markee exemplifies the notion of two-in-one innovations in a project conducted in an American university. This project not only introduced the task-based syllabus into classroom, but also implemented administrative and academic innovations for organizational development. For instance, by means of the development of communication channels (e.g. staff meetings, seminars, and orientations, etc.), participants at all levels obtained a complete understanding of the innovation. By means of the development of the teaching programs, teachers were well trained and became better informed. The outcomes showed that the administrative and academic development not only facilitated the implementation of the new syllabus, but also brought about organizational development.

To implement two-in-one innovations requires the development of the 'institutional capacity to innovate' (Huberman 1992). However, the literature reveals that most projects fail because their project designers
attempt to manage the projects from the central office instead of developing school capacity (see Table 1.3. in 1.3.). Development of the institutional change capacity is largely neglected due to 'lack of awareness of the limitations of teacher and school administration or knowledge about how to implement the project' (see Table 1.3. in 1.3.). Curriculum developers, it is argued, cannot develop institutions without developing the people inside. Therefore, inserting outside resources and outside expertise is needed for such a capacity to take root. I have earlier mentioned the view that teachers should be better informed through on-going teacher training (1.4.1.). Similarly, the management should seek adequate expertise and resources to be better informed so that it can build up its change capacity. Through the process of organizational development, the implementers, including the management and teachers, focus on the processes and contents of change, learning to develop the capacity to implement change as organizational development. Only when the management and teachers are assisted to build up their change capacity, is there an opportunity for 'change as organizational development' (Morrison 1998).
Table 1.6. A two-in-one innovation model (based on Markee 1997)

<table>
<thead>
<tr>
<th>Primary innovations</th>
<th>Any innovative idea that requires new skills and value systems from its adopters, such as changes in teaching/testing materials, methodological skills and pedagogical values.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary innovations</td>
<td>Examples of secondary academic innovations include a teacher training mechanism. Examples of secondary administrative innovations include an effective communication mechanism (e.g. orientations, staff meetings, computer technology), or any other supporting resources.</td>
</tr>
</tbody>
</table>
Chapter Two  Innovation management

In the previous chapter, I have discussed the problems raised in project implementation and the insights into these problems reported in the literature. This chapter is going to discuss the area of educational management of innovation.

Innovations in education have developed general principles for how to set an innovation in motion and how to make it implement successfully. Education could also be informed usefully from other fields of study, such as business and management, and their perspectives on the management of people and organizations. Since some insights and concepts from the business literature have useful implications for the world of educational innovation, some of them will be presented in this chapter. For example:

1) the organizational theory that is used in planning and managing educational change is derived from the literature of business practices;

2) there is literature from business and management that describes personal and emotional reactions to change, addresses factors for resistance to change, and discusses ways of overcoming resistance and resolving conflicts (Morrison 1998).

This chapter first discusses the organization cultures, and then relates them to the innovation models and change strategies. It also discusses the attributes of innovations and explores the barriers to innovations that have been reported in the literature. Finally, ways of conflict management will be discussed, as innovations cannot take root without finding ways of coping with resistance. In short, it is important to understand the range of factors that affect the design, implementation, and maintenance of innovation, regardless of educational context (Markee 1997: 42).
2.1. The context of innovation: four organizational cultures
The understanding of organization cultures helps uncover the local knowledge relevant to an innovation (also see 1.4.2.). Change agents (see 1.2.1.) often choose one particular model of innovation and change strategies, depending on the type of organizational culture where the innovation is going to be located. An effective change agent has to choose an appropriate model of innovation and change procedure and technique for innovation management, rather than imposing a model that is unfeasible to the contextual culture.

Based on business organization and public corporations, Handy (1978) lists four types of organizational culture, some of which can be applied to schools.

2.1.1. The power culture
In the power culture has a central power figure surrounded by ever-widening circles of power and influence, just like a spider's web. Because all direction and control radiate from the centre, the ability of the person in the centre is the key to understanding how such small organizations function. In a small organization, the power culture is very effective. However, the danger that lies in the dominance of the character of the central figure is that if the central figure is weak, then the organization is weak, too. If an organization is badly staffed with a wrong person in the centre, it will be ineffective.

In the power culture, people usually gain their power from several sources of power. Ownership of an organization is one of them. Therefore, the owner-managed language school is a representative of the power culture. Discussion on other power sources will be in 2.5.2. below.

2.1.2. The role culture
In the role culture, individuals are role-occupants with job descriptions. It is carefully organized as a bureaucracy. Role cultures provide stability
and security. However, if there is any change that affects the role culture, there is often little flexibility or adaptability available from staff, as they have been organized too well and too long. Many state schools are a representative of this type.

2.1.3. The task culture
In the task culture, specialist groups or teams come together to solve particular problems or achieve specific objectives in the process of problem-solving. After they have completed their task, they are changed or disbanded. The task culture is usually a warm and friendly culture because it is built around cooperative groups of colleagues without much hierarchy. However, the problem is that this type is expensive. A committee or team for educational reform is a representative of this type.

2.1.4. The person culture
The person culture puts the individual first, and the organizational resources are made available for the individual's talents. These individuals are given a great deal of freedom to do their own thing. However, the problem is that this type tends to be loosely grouped in a cluster or constellation and therefore it is difficult to reach consensus. Doctors who group themselves in a specific practice are a representative of this type.

2.2. Models of innovation and change strategies
Innovation cannot be understood without investigating the relationships between an innovation and its context. White (1988: 137) calls for attention to the interactions between 'innovation and context', and stresses that 'organization culture, innovation strategy and models of innovation will probably be interrelated.' This section will discuss models of innovation and change strategies and relate them to culture type (Figure 2.1. below). Havelock (1971 in White 1988) has described three main models of innovation: the centre-periphery model; the research, development, and
diffusion model; and the problem-solving model. On the basis of behavioural and sociological theories, Chin and Benne (1976) identify three change strategies: power-coercive change strategies; empirical-rational change strategies; and normative-re-educative change strategies. The adoption of one type of change strategy rather than another is often determined by the different characteristics of each innovation model and the organisation culture where an innovation is going to be located. The relation between these concepts is that in a given organisational culture, individuals with a particular innovation model will tend to choose a particular change strategy.

2.2.1. Centre-periphery model
In this model, the ‘centre’ tends to transfer institutional models, resources, and educational ideologies to its ‘periphery’ (i.e. end users). International aid projects are typical of the centre-periphery model. The aid agencies (i.e. the centre countries) decide and design the contents of change projects and then pass them down to their periphery countries. An example is presented in Stephenson’s report (1994) about the ELT projects in Sao Tome and Principe. Expatriate experts from the developed countries went to Sao Tome and Principe, and produced teaching materials for schools. Each new scheme was imposed at Ministry level and teachers were not involved in the change process. However, these projects had problems arising from this model. Because there was little or no consultation between the decision-makers and teachers, the new materials produced in these projects were mostly based on western ideas about language education. Lack of teacher ownership led to the inevitable decline of teacher enthusiasm. Consequently, teachers perceived the change as irrelevant to their own practice and then resisted it.

Similar centre-periphery relationships also exist in the educational systems of countries in which the power to promote educational change rests with a
small number of senior ministry of educational officials who are at the centre of the decision-making process (Markee 1997). The centre (i.e. the central ministry) takes control of decisions, including systems, resources, or educational ideologies and passes them down to its periphery (i.e. the local authority and teachers). People on the periphery of this decision-making process (i.e. the local authority and teachers) merely implement the decisions imposed top-down. However, it is necessary to pay attention to the rise of the double centre-periphery model. The introduction of marketisation from business thinking into education (Morrison 1994; 1998) tends to produce this double centre-periphery model. It is not the focus of this study to examine in detail the market forces in education, but their influence on the centre-periphery relationships cannot be neglected. Due to social and economic change, Tooley (1996) has indicated that free marketers have advocated the furtherance of commercialism and consumerism into education and the reduction of state intervention in education. Morrison (1994) also echoes that market forces in education will free up the supply side of the education market to meet the demand side of the market, as seen in the educational policy of the Conservative government of the 1980s and 1990s in the U.K. As in the centre-periphery model, the centre-periphery relationships remain in operation in the double centre-periphery model. The centre at the first layer (i.e. the central ministry of education) still takes charge of the promotion of the educational change. However, it no longer takes responsibility for the implementation. There is a centre at the second layer (i.e. the local school boards) underneath to take charge of the implementation of the central policy, in terms of decision-making, problem-solving, and resource-seeking. For instance, the central ministry of education may lessen the local schools' heavy reliance on its provision of resources. The local school boards are required to take responsibility to seek resources for the implementation on their own in order to satisfy their customers (students) and remain competitive. The double centre-periphery model will be illustrated in our case studies in the later chapters.
The power or role culture often adopts the centre-periphery model or the double centre-periphery model. Power-coercive strategies are typically used in these models. They often use rewards or sanctions to ensure that adopters comply with the policies and goals proposed (Markee 1997: 64). Changes are based on sanctions that force adopters to change or act in a certain way (Kennedy 1987: 164). For instance, adopters are rewarded for their satisfactory performance with promotion or salary increases, etc. On the other hand, they are punished for unsatisfactory performance (ibid.).

Vroom’s expectancy theory (1964 in Morrison 1998) from business explains the instant effectiveness of the use of rewards and sanctions. Expectancy theory is based on the assumption that people will involve themselves in change if they expect it to bring about personal benefits (Morrison 1998: 132). It is argued that the more benefits people perceive, the greater willingness they will have to be involved in the projects of change (ibid.). These perceived benefits, such as financial benefits, job security, and promotion opportunities, etc. are assumed to be an effective motivator to improve job performance. However, any change often requires additional time, energy, and finance, etc. If the adopters do not think the advantages of an innovation will outweigh its costs, it may not be easy to persuade them to accept it. In fact, attributes of innovation also influentially affect the adoption behaviour, as will be discussed later in 2.4. below.

2.2.2. Research, development, and diffusion (RD & D) model
In this model, researchers and developers conduct in-depth research and provide rational, systematic, and theory-based products to the users. Like the centre-periphery model, this model also relies on top-down change. Change agents are still viewed as a giver of information and the users are as the receivers (Barmada 1994: 35). However, this model differs from the
centre-periphery model in that it 'seeks to increase the flow of information about the environment' (Rondinelli et al. 1990: 77).

This model of change is also found in the power culture or role culture. It typically uses rational-empirical strategies to manage change, but sometimes power-coercive strategies are adopted, too. In this type of strategy, people are viewed as rational and intelligent beings, so they are likely to adopt change once evidence has been proved to be beneficial to them. However, Markee (1997: 65) argues that the RD & D model is ineffective in persuading adopters to accept change when change agents fail to address the implementation issues (see 1.3.1.). Therefore, this type of strategy does not always lead to success. Tomlinson's account (1990; see 1.3.1.) of the implementation of the PKG approach is an example to exemplify the RD &D model and such implementation issues.

2.2.3. Problem-solving model
When this model is applied in education, teachers themselves often act as internal change agents. Its purpose is to engage adopters in a process of bottom-up innovation (Markee 1997: 67). Teacher research in teacher programs as discussed in 1.4.1.3. is representative of this model. Teachers use teacher research to articulate problems and seek solutions. In the process of problem-solving, teachers discover their teaching belief and explore what constitutes good teaching so that they are more likely to change their classroom behaviour. This model is found in the task culture or person culture, and it differs from the two preceding approaches in that it is eventual users of an innovation who identify the need for change.

Normative-re-educative strategies are typically used in this model. The idea underlying this strategy is that people's social values greatly affect their actions and beliefs. When people change their habitual behaviour and beliefs, they are more likely to change their ideology. That is, accepting
change may result in changes in attitudes, values, skills, and relationships. The implementation of this strategy involves the process of negotiation, problem-solving, and collaboration (Kennedy 1987: 164).

Kennedy's study gives an impressive example which illustrates the success of this model in helping teachers inspire teacher development. In Kennedy's report (1987), a teacher-education project in Tunisia was operated by British expatriate experts in the model of problem-solving coupled with a normative-re-educative strategy to develop the ESP teacher education at university level. The teachers were involved in material design. Apart from the help from rational-empirical strategies in which the seminars and newsletters provided necessary information to teachers, the major responsibility for degree of change and acceptance or rejection of various aspects was placed on teachers (ibid: 168-169). Because teachers were the end users of the materials, they had to decide what and how to write in the process of negotiation, problem solving, and collaboration. Through the process of material design, the teachers understood the principles underlying a method and increased their professional knowledge, which was more than a change at a surface level.

Among the three innovation models, the centre-periphery model coupled with a power-coercive strategy has value in overcoming the inertia in the system (Kennedy 1987: 164). The imposition of sanctions can force people to act in a certain way. However, it presents a lack of teacher ownership that may 'discourage individual initiative' (Markee 1997: 64) and promote covert resistance. As a result, teachers will not feel any job satisfaction from the change (see Stephenson 1994). Besides, the process of using sanctions to persuade adopters will require the highest level of control and the highest level of monitoring from the change agents during and after the innovation process (see Figure 2.2. below). It will therefore have the risk in sustainability 'once the project support is taken away'
The RD and D model is also a top-down approach, but it does not typically use sanctions to force change. The problems is that, as discussed in 1.3.1, if change agents do not resolve the implementation issues, adopters are likely to accept change, but without necessarily implementing it. If this is the case, this model also requires a high level of control and monitoring, but produce a low level of job satisfaction, as that in the model of centre-periphery innovation. By contrast, change in the problem-solving model is based on a consensus of all adopters who perceive it as necessary, rather than being imposed externally. This model requires a low level of control and monitoring, but produces a high level of job satisfaction (see Figure 2.2. below). The implication from the differences of the three innovation models and strategies is that the ineffectiveness of top-down models often results from lack of ownership from the implementers, so the problem-solving model coupled with a normative-re-educative strategy seems to be more likely to produce innovation than the other two. Indeed, the literature also reveals that the latter is more effective in producing ideological change and sustaining change, as it attempts to foster teacher ownership. As Markee (1997: 66-67) indicates, this innovation model is 'theoretically the most popular approach to promoting change in education - at least in English-speaking countries.'

Figure 2.1. Innovation, context, and model (based on Handy 1978, White 1988, and Markee 1997)

<table>
<thead>
<tr>
<th>Models of innovation</th>
<th>Change strategies</th>
<th>Organization culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre-periphery</td>
<td>Power-coercive</td>
<td>Power</td>
</tr>
<tr>
<td>RD and D</td>
<td>Empirical-rational</td>
<td>Power</td>
</tr>
<tr>
<td></td>
<td>Power-coercive</td>
<td>Role</td>
</tr>
<tr>
<td>Problem solving</td>
<td>Normative-re-educative</td>
<td>Task</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Person</td>
</tr>
</tbody>
</table>
2.3. The leadership styles

The leadership style affects the style of management. How a change agent leads the group or participants is a key to the success of innovation. The adoption of an appropriate leadership style at each stage of the innovation process will surely effect innovation. Blanchard et al. (1985) state that there are four leadership styles: directing, coaching, supporting, and delegating. As they describe it, the leadership style in these styles is a combination of two behaviours: the directive behaviour and the supportive behaviour (Blanchard et al. 1985; see Table 2.1. below). The directive behaviour is:

Clearly telling people what to do, how to do it, where to do it, and when to do it, and then closely supervising their performance (ibid: 46).

The supportive behaviour involves:

Listening to people, providing support and encouragement for their efforts, and then facilitating their involvement in problem-solving and decision making (ibid: 46).
<table>
<thead>
<tr>
<th>Supporting:</th>
<th>Coaching:</th>
</tr>
</thead>
<tbody>
<tr>
<td>High supportive behaviour and</td>
<td>High supportive behaviour and</td>
</tr>
<tr>
<td>Low directive behaviour</td>
<td>High directive behaviour</td>
</tr>
<tr>
<td>Delegating:</td>
<td>Directing:</td>
</tr>
<tr>
<td>Low supportive behaviour and</td>
<td>High directive behaviour</td>
</tr>
<tr>
<td>Low directive behaviour</td>
<td>Low supportive behaviour</td>
</tr>
</tbody>
</table>

Barmada (1994) gives an example in a project where she acted as an internal change agent and adopted a variety of leadership styles, depending on the need of each stage of innovation. There were seven cycles of implementation. Her leadership style in the first six cycles ranged between the directing and coaching styles. For instance, with those teachers who were less competent and had less confidence in themselves, she used the coaching style and supervised their work closely. After all teachers had developed their confidence and enhanced their professional practice, in cycle six she changed to the supporting style where she listened to teachers' discussion, encouraged them, and facilitated their decision-making. In the final cycle, she changed to the delegating style where she intentionally left teachers to work on their own, so that they could experience independence and learn how to work on their own. Due to her effective leadership through a variety of leadership styles, the participants were given a clear rationale and finally developed their professional practice as intended.
The implication derived from a variety of leadership styles is that an effective change agent has to understand the progress of innovation and adjust his/her leadership style in accordance with the participants’ need throughout the innovation process. The ability to adopt a variety of leadership styles indicates the high level of expertise that a change agent needs to possess. In 1.2.1. in Chapter One, I have also discussed several responsibilities that an effective change agent should take. All this highlights the importance of the role of change agents in the success of innovation.

2.4. The attributes of innovation

In 2.2.1. above, it has been mentioned that Vroom’s expectancy theory (1964) from business may not be always effective in pushing people to act in a certain way. This is because innovations themselves possess attributes that either promote or inhibit adoption (Markee 1997: 59). The adopters’ perceptions of the attributes of innovations will influentially affect the adoption rate, which is often neglected by many change agents in the power culture who are convinced of the effectiveness of sanctions and rewards. Based on a cross-disciplinary analysis of 1,500 innovation studies, Rogers (1983) lists four attributes that are positively related to the adoption rate. These are relative advantage, compatibility, trialability, and observability (Table 2.2. below). The last attribute — complexity — is perceived as negative to the adoption rate (see Table 2.2. below). I will illustrate with examples how these attributes affect the adopters’ willingness to accept change.
Table 2.2. Attributes of innovations (based on Stoller 1994 & Markee 1997)

- **Relative advantage**: the degree to which an innovation is perceived as better than the idea it supersedes. The more relative advantages of a change the adopters perceive, the higher chance they will accept the change.

- **Compatibility**: the degree to which an innovation is consistent with already existing philosophies, policies, practices, and beliefs. Innovations that are too different from potential adopters' current practices and values are unlikely to be adopted.

- **Trialability**: the degree to which an innovation can be experimented with on a limited basis. Potential adopters prefer to try out an innovation in incremental stages, rather than innovations that require an all-or-nothing adoption strategy.

- **Observability**: the degree to which the results of an innovation are visible to others. When the results are more visible to adopters, they are more likely to accept the change.

- **Complexity**: the degree to which an innovation is perceived as difficult to use and/or understand. Unlike the previous four attributes, this attribute has negative effect on adoption. When potential adopters perceive the change as highly complex, they are less willing to implement it.

Bracamonte (1999) has used these attributes to understand why the teachers accepted one practice more easily than another. The introduction of two different types of technology had completely different impacts on the users. The use of videos in class was perceived by teachers as highly acceptable, in terms of a high degree of the four attributes positively related to adoption: relative advantages, compatibility, observability, and trialability. In addition, the teachers did not consider videos difficult to use. By contrast, the use of computers in class was perceived by teachers as less acceptable, due to the low degree of teachers' perceived relative advantages,
compatibility, observability, and trialability. Also, the teachers perceived
the use of computers as highly complex, which inhibited the adoption.

Markee (1997) uses these attributes to analyse the factors that potentially
affect the adoption of task-based teaching by teaching assistants in a teacher
innovation project at an American university, and then seeks solutions to
reduce resistance. These arrangements oriented to the attributes had
made the project 'an acceptable innovation' (ibid: 90). In the following, I
will discuss them in more detail.

Relative advantages
Because the teacher assistants would be unwilling to devote additional time
and energy to producing task-based materials, this project facilitated
adoption by embedding materials development work into the program from
which the teachers could receive academic credit. In this way, the
teachers were more willing to try out the new practice because they realized
that it would bring them advantages that would outweigh the cost of
disadvantages.

Compatibility
Many of the procedures used in task-based teaching were already somewhat
familiar to most teachers, as they had experimented with student-centred
techniques in the past. Therefore the new practice was considered to be not
too different from the current practice and the teachers were likely to make it
compatible with the current pedagogical practices.

Trialability
The teachers were not asked to try out the new practice right away. They
were given approximately 10 to 12 weeks to get familiarised with the
practical aspects of task-based teaching before they started producing their
own materials.
Observability

All teachers were exposed to the task-based materials produced by their peers and predecessors. They also attend a workshop and were given the opportunity to produce a mini task-based unit. Therefore, the result of the innovation was observable to the teachers.

Complexity

To resolve the problem of complexity inherent in task-based teaching, teachers programs were provided to give teachers the opportunity to develop their understanding of task-based teaching theory. Because the teachers had been taught in a task-based way in the past, they were able to draw on both their practical experience of task-based teaching and the theoretical background and then produce materials of their own. Furthermore, they were given feedback regularly from the project director and others during the process. By means of these arrangements, the level of complexity inherent in task-based teaching was lessened.

The above cases studies exemplify that change is always constrained by the attributes that potential adopters perceive a given innovation to possess. Thus, the implication from these attributes is that change agents should consider these attributes as a natural part of any innovations. They should study carefully these attributes of a specific innovation and understand how they affect the adoption. The understanding of these attributes will help change agents identify the characteristics of each innovation proposed and help them seek appropriate solutions or arrangements to minimize resistance and ensure implementation. As Stoller (1994 : 321) stresses, the understanding of the roles of different attributes can help 'create an organizational climate more likely to support the development, implementation, and diffusion of innovations.'
2.5. Reasons for failure

In addition to the attributes inherent in all innovations, there are other barriers to innovation that stem from the conflicts between all parties involved (i.e. the innovators and the users, see 1.2.). The interaction between these parties can bring about conflicts that appear as barriers to the innovation. Four barriers to innovation, identified by Dalin (1978) and Dalin et al. (1993), are regarded as reasons for the failure of innovation. I would like to add one more barrier, which is the communication barrier.

2.5.1. Value barrier

By the value barrier is meant that the participants will resist or reject an innovation if the proposed change challenges their value system or if they do not agree with the proposed values. The value barrier overlaps with one of the attributes above, i.e. compatibility. We have discussed the type of problems resulting from the incompatibility between the new teaching values, practice and the existing ones and related them to several case studies, e.g. Pacek (1996) in 1.3.1.

2.5.2. Power barrier

Power is defined as 'the functional ability to make others commit themselves to a course of action' (Maurer 1991: 12). It refers to how people wield power and influence others (Blase and Anderson 1995: 13). Power barriers occur when the people in power resist an innovation if it diminishes their power or they may accept it if it brings them greater power. As Plant (1987) points out, 'threat to power base' is one of the impeding factors that make people in power resist change. For example, Swales (1980 in Barmada 1994) discusses the conflict between the English department at the university and the new ESP/ELT project. The English department considered language teaching to be within its domain, so it perceived the new language project as a threat to its power and thus resisted it. Therefore, any innovations would be difficult to succeed if the change agents did not seek
support from the authorities in power and have them endorse the innovation proposed. This problem will also be presented in our case studies in the later chapters.

Moreover, the phenomenon of how power influences the decision-making of innovation is explored by some writers. Maurer (1991) mentions that people usually gain their power from several sources. Maurer classifies the common sources of power one may gain his/her power from in education. For example,

- One gains his/her power from providing resources. That is, one makes the others carry out a course of action because s/he owns the resources that they need.
- One gains his/her power from having political connections. Such a connection power is often created in the situation where the people gain the power because they have the close connection with the power source (e.g. the owner of the organization).
- One gains his/her power from affecting decisions. That is, A can force B to do what B would not do because s/he has either the hierarchical status or functional ability to affect decisions.

To the above power types, Carnall (1995) adds ‘expert power’, i.e. the power that is brought by the possession of knowledge, expertise and experience. In contrast with expert power, people with connection power or other power sources do not necessarily possess adequate knowledge and expertise in relation to the innovation proposed. From the perspective of innovation, if they have the opportunity to act as change agents, it is very likely that their inadequate knowledge and expertise will be unable to develop the institutional capacity to innovate (see 1.3.4. and 1.4.3. in Chapter One), and thus will endanger the success of innovation. Therefore, if the source of change agents’ power is not their expert knowledge, but connections or some
other source, they have to be well trained to ensure that they do have adequate expertise in innovation management. The problem caused by 'the powers that be' who possess connection power, but do not seek adequate expertise, will be illustrated later in our case studies.

2.5.3. Practical barrier
Resistance to change is likely to occur when the adopters have insufficient resources, such as materials, people, time, money, administrative support, or expertise, etc.

For instance, in some understaffed institutions, teachers are often overloaded, so they usually do not have time set aside for research activities. They are in need of research resources, reduced workload, and incentives, etc. These practical barriers become a hindrance to innovation.

2.5.4. Communication barrier
The establishment of an effective communication mechanism, such as a directive communication channel, is very important before the innovation is set in motion. Throughout the innovation process, adopters 'must be given multiple opportunities in different forums...' (Markee 1997 : 174), because 'Good communication among project participants is a key to successful curricular innovation' (ibid.). Lack of sufficient communication will pose huge obstacles to the diffusion of innovation and cause misunderstanding among all participants. This type of problems will be presented in our case studies in the later chapters.

2.5.5. Psychological barrier
When change brings challenges to people's security, confidence, or their other emotional profiles, they are very likely to resist it. A number of very frequent factors associated with psychological profiles, outlined by Plant (1987), are considered to promote participants' resistance to change, such as:
For example, teachers will feel threatened when they are asked to change from the traditional role as a knowledge transmitter to the role as a teacher-as-researcher. Burns' study (1999) shows that this changing role promotes a variety of anxieties in teachers, such as the anxiety about revealing individual teaching practices or the anxiety about lack of research skills and producing a written account of the research, etc. Those anxieties will have negative impacts on adopters' psychological profile and promote their resistance to change.

Because change is also constrained by individuals' psychological profiles, change agents cannot ignore the impacts caused by the psychological factors. In 1.2.2, we have already mentioned that personal characters and background will affect one individual's behaviour of adoption. We now add that adopters' reactions to change differ at each stage in accordance with their perceptions of the change. Each stage varies 'from complete rejection to complete acceptance' (Morrison 1998: 121). Morrison (1998) lists four stages, described by Harris (1987), which reflect the common stages of reaction experienced by many adopters, i.e. antagonism, indifference, compliance, and positive commitment. Teachers' different stages of reaction to change explain the complexity of changes in their conceptions and behaviour. Nevertheless, they also suggest that change agents need to 'avoid treating the non-adoption of their ideas by potential users as either irrational or unfounded' (Markee 1997 : 47). Since it is not so easy to change one's values and behaviour, as mentioned in 1.3.2, teachers need to
be given more time and patience to cope with their personal and emotional change.

After barriers to innovation, I will turn to the aspect of conflict management. The literature reports that many project developers are good at developing an innovative idea, but do not know how to manage conflicts that arise from the innovation process. Because it is inevitable to have conflicts arising from the innovation process, an effective change agent cannot simply avoid dealing with conflicts or ignore them.

2.6. Conflict management
Maurer (1991: xiii) defines conflict as 'a disagreement between two or more individuals or groups over an issue or issues'. In reality, ways of dealing with resistance or conflicts differ from one organization to another. Each differs in styles of managing conflicts, depending on individual concerns. Everard and Morris (1990) indicate that there are two main concerns that will affect one's style of managing conflict, i.e. concern for relationships and concern for results. They classify five ways of coping with conflicts that reflect the level of each concern by the management. These five ways are described as below:

1. Avoiding: the management tends to avoid potential problems and postpone the conflicts in the hope that they will go away after a certain period.
2. Fighting: the management tends to defend itself and blame teachers.
3. Smoothing: the management tends to put itself in the teachers' shoes and takes teachers' viewpoints into consideration.
4. Compromising: both the management and teachers give up certain demands in order to reach a decision in conflicts.
5. Problem-solving: the management and teachers work together towards an agreed solution to the problems so that the conflicts between them can be resolved.

According to Everard and Morris, low concern for relationships and results will make the management adopt the strategy of avoiding. High concern for relationships and low concern for results will make the management adopt the strategy of smoothing. Low concern for relationships and high concern for results will make the management adopt the strategy of fighting. High concern for both relationships and results will make the management adopt the strategy of problem-solving. When the management's concern for both relationships and results is between high and low concern, it will adopt the strategy of compromising.

Different styles of conflict management will lead to different outcomes. Among these strategies, avoiding problems cannot resolve conflicts because it simply buries rather than solves the problems (Carnall 1995). Fighting against teachers' viewpoints only suppresses their resistance and promotes their token acceptance, which will intensify the conflicts, rather than resolve conflicts. The outcome of this strategy will be that the potential conflicts still remain and the collegial relationship is damaged. Smoothing teachers' resistance by taking their viewpoints into consideration may ease the conflicts and produce friendly relationships. However, Maurer (1991: 25) comments that this strategy is ineffective in resolving conflicts, as each party has to give up certain demands in order to get a decision in conflicts, but such giving constitutes a loss and therefore the outcome cannot satisfy all parties. Unlike the previous strategies, problem-solving allows both the management and teachers to probe the problems together and seek an 'agreed solution' perceived by all parties as necessary and likely to sustain. The outcome will be more likely to satisfy all parties, as neither of them is forced to give up certain demands. There will be also a good relationship, as
neither of them is forced to accept change. For these reasons, the style of problem-solving has high concerns for relationships and results and is considered to be effective in managing conflicts and sustaining innovation. It is also considered to lead to a 'win/win situation' (Everard and Morris 1990), i.e. the management wins and teachers win as well. The management maintains a good relationship with teachers and also achieves the intended goal, so the management wins. At the same time, teachers will be willing to accept a new change from which teacher development may take place, so teachers win, too.

However, despite its lasting growth in the outcomes, Maurer (1991) indicates that in reality the implementation of the persuasion model of problem-solving seems to take time. This process involves 'building influence among staff members, using that influence over time' (ibid : 27). The more time is spent on achieving consensus, 'the more costly the process becomes' (ibid: 30). Therefore, in reality no school could be run entirely using this model.

Moreover, we cannot understand why a problem-solving strategy succeeded or failed without reference to the organization type where it was adopted. In the power/role culture where institutions have a strong boss-subordinate role relationship between the decision-makers and teachers, the involvement of teachers in decision-making or problem-solving may encounter resistance from the people in power. For instance, power barriers, as mentioned in 2.5.2. above, indicate the great difficulty in persuading the boss to adopt a problem-solving strategy to seek consensus from the subordinate on how problems should be solved to minimize conflicts. Failure to resolve conflicts will promote either covert resistance or token acceptance from its end users, which indeed is the common problem of failure of most projects. This problem will be exemplified in our case study in Chapter Six.
Chapter Three  Research Methodology

Ethnographic methodology was adopted in this research for the reasons below.

3.1. The aim of the research
This research, as stated in the Introduction, aims at examining the change process from the views of bottom participants at a specific private-enterprise institution to look for the factors for success or failure of innovation in ELT innovations. It involved a detailed investigation of the culture as presented by the participants during the innovation process through their actions, behaviour, and opinions towards innovation. Its ultimate goal was to understand this specific culture and assign it significant meanings (Fetterman 1989). Therefore, ethnographic methodology was thought to be the most appropriate method to achieve the aim of the research and matches the nature of the study because '...ethnography means describing a culture and understanding another way of life from the native point of view' (Neuman 1997: 346).

3.2. The contributions of ethnography in English language education
In the past decades, ethnography has been used in education research in relation to curriculum development, project management, and classroom research, etc. For example, it has been used to investigate the hidden curriculum of a 'white ghetto school' and the analysis of the classroom group as a microcosm of the wider community (Gearing and Epstein 1982). It was also adopted to investigate the institutional and micro-political conflicts within a British curriculum project (Shipman, Bolam, and Jenkins 1974). Since ethnographic methodology has contributed towards the understanding of the complexity of a social group or social world, it can be also adopted to investigate the reality as presented in the classroom of an English program and its wider community. Holliday (1996: 235) argues that, if international English educators want to understand and negotiate the cultural complexity
and variety in English language classrooms across the world, ethnography is useful for them to achieve ‘sociological imagination’, i.e. the ability to locate themselves and their action critically within a wider community. In other words, when the focus of ELT issues is moving from what happens to language during the classroom teaching process into the dynamics of an English program and its wider community, ethnography has value in ‘broadening perspectives beyond language and the classroom’ (ibid: 239). For instance, in her account of a specific English program and its wider context, Barmada (1994) conducted ethnographic research to evaluate the implementation of participatory institutional-self-evaluation (PISE) at the ELT centre of her university. This enabled her and her colleagues to better understand that if this ELT centre was to succeed and survive, they had to adapt it and change it to fit the local educational culture. Holliday (1995) conducted ethnographic research to investigate in-service teacher development. This enabled him to explore how the effect of the ‘local rhythms’ of a specific organisation would affect project implementation and sustainability. Their findings by means of ethnographic method provide valuable experience for international language educators. Therefore, to contribute valuable insights to the knowledge of ELT innovation projects, we have to better understand the dynamics of an English program and its wider community by exploring human meanings and interactions viewed from the insiders’ perspective, which only ethnography can provide.

3.3. The key concepts of ethnography

Ethnographic methodology and its distinctive contribution to social research, such as the detailed investigation of patterns of social culture, have often been discussed (Neuman 1997; Hammersley 1992; Hammersley and Atkinson 1983; Fetterman 1989; Agar 1986; Delamont and Hamilton 1984). Those reports present the key concepts of what ethnography is all about.
3.3.1. A cultural interpretation
Ethnography is an interpretative approach and concerned with 'cultural interpretation' (Fetterman 1989: 27, 28, 40). Ethnographers gain access to a specific group, observing their activities in everyday life in its natural setting over an extended period of time and understanding the perspectives of the people under study. They search for logical, cohesive behaviours and ideas that characterise a social group and assign them significant meaning. They describe cultural knowledge, both tacit and explicit (Neuman 1997: 346-347). Explicit knowledge includes social events which most people can easily describe what happens. Tacit knowledge includes the unspoken cultural norm which most people are not aware of. Both the unspoken cultural norm and what is already known will be under careful analysis in ethnographic research. Ethnographers give a thick description and capture the sense of what occurred, and thereby make multiple interpretations (ibid.). In short, the study of ethnography is to move from what is heard or observed to what is actually meant or implied, which requires the researcher to interpret the data by giving them cultural meaning.

3.3.2. A holistic outlook
Ethnography involves the description of the behaviour of a social group in its natural setting. It stresses the holistic examination of a phenomenon and seeks to avoid the separation of components from the larger context to which these matters may be related (Jorgensen 1989: 19). Ethnographers gather all kinds of data in the field and ensure that they cover all angles to gain a comprehensive and complete picture of a social group (Fetterman 1989: 29). In particular, they accept the complex context scene without any attempt to control the variables and use it as their data base. As Delamont and Hamilton (1984: 18-19) explain,
The ethnographer uses a holistic framework. He accepts as given the complex scene he encounters and takes this totality as his data base. He makes no attempt to manipulate, control or eliminate variables.

On the other hand, although ethnographers collect whatever data are available, because of the method's holistic orientation, they have to narrow down their focus on salient issues with which they are concerned. In other words, they start with the broadest concept, culture, then gradually shift into more narrow concepts for their cultural interpretation (Delamont and Hamilton 1984; Fetterman 1989).

3.3.3. Emic-etic perspectives

Regarding data analysis, ethnographers need to make sense of the data they have collected from the native's views as well as their scientific analysis. It is important to build 'rapport combined with objectivity', see the ordinary in a new way, and make the tacit culture visible. In other words, besides the emic understanding of a group, an etic perspective is required from ethnographers to make insightful analysis of behaviour and prevent them from developing impeding over-rapport and bias. 'Emic perspective' means the insider's or native's perspective of reality; 'etic perspective' is the external, scientific perspective of reality (Fetterman 1989: 30-32). Etic perspective requires 'an attitude of strangeness' that notices the ordinary through the eyes of a stranger (Neuman 1997: 354). Neuman (ibid.) describes strangeness,

It helps him or her see the ordinary in a new way, one that reveals aspects of the setting of which members are not consciously aware.
3.4. The writer's existing role in the research context
Here, I have to first explain my relationship with the case subject under study. I was a member of the English staff at the institution under study and had spent a couple of years working there before the data collection began. I was seen as a natural part of the setting, which saved trouble in the negotiation of access to the field. I was able to gather data by direct observation and other means (e.g. informal conversation, questioning, etc.) pertinent to the field setting (ibid.), which is a major characteristic of ethnography. Moreover, in this top-down setting, I was a receiver and not empowered to initiate a change, or to design, introduce, and direct the process of implementation. I had to accept the complex scene as it was and not disturb it. My existing status in the research context exactly matches the role of ethnographers who study the social world in its natural state and make no attempts to manipulate, control or eliminate variables (Delamont and Hamilton 1984: 18-19). My role as an insider as well as a researcher enabled me to adopt both an emic stance and an etic stance (see 3.3.3. above).

3.5. Research procedure
Unlike quantitative research, ethnographic research is non-linear and cyclical and does not follow a fixed sequence of steps (Neuman 1997: 330-331). There are always opportunities for the revision of the research focus as the research process goes on. The flexibility of ethnographic methodology was a big advantage in my field work because it let me shift the direction and follow the leads at any time (ibid.: 349). In general, my research procedure includes six stages: selecting the research subject, selecting the research informants, selecting field methods, deciding on the length and place of study, presenting data, and analysing data.
3.5.1. Selecting the research subject
The institution under study is situated in an agricultural area in Taiwan. It was chosen as research subject for two reasons. First, this institution, a business-oriented vocational junior college, aimed to undertake system transformation onto the university level by initiating innovation projects, which provided a good source for the research topic in relation to innovation. Secondly, I had been working at the institution under study for a couple of years, as mentioned in 3.4, so I was seen as a natural part of the setting and there was no difficulty in gaining access to the field.

3.5.2. Selecting the research informants
The writer was one of 16 English language teachers at the institution and my personal relationship with the insiders helped me identify reliable research informants and seek reliable information from them. Since the deepest possible understanding of the English language program at the institution is the aim of the research study, the other 15 English language teachers were possible informants. Due to the physical constraints caused by the office building, not all 16 English language teachers shared the same office and in this way fully exchanged opinions. However, since I shared the main English teachers’ office with the other 9 English language teachers, they formed the major research informants. Through my observations of my daily contact with them, their reactions to any change in the institutional policies or their opinions on pedagogical issues constituted the major data. The staff chats among us were the major source of the excerpts used for the data analysis. However, to have a better understanding of the other 6 teachers’ reactions (such as teacher A, teacher B), I still attempted to create opportunities to have a conversation with them where possible. For example, I initiated conversations with them when I accidentally met them in the English teachers’ office, the photocopy room, in corridor, or in their office.
Apart from the English language teachers, I also had close contact with two administrators (administrator D and librarian A) who were in charge of the library stock and the plan for the computer/language room. They were able to offer information from another perspective. To elicit information about the policy towards teachers' overseas study, I also talked to the principal, the director of the Personnel Office, and the dean of the Teaching Affairs Office. They were assumed to offer highly relevant information.

For the different purpose of the questionnaires (see 3.5.3.3. below), students in the fourth year of studies at this college at the age of between 18 and 19 years old were also my essential source of information. They were chosen because they were in the last stage of the four-year English program, so they were assumed to be able to give more information than junior students.

3.5.3. Field methods
The field methods that were adopted in this research were participant-observation, document collecting, questionnaires, informal conversations and casual questioning. The data gathered in the field through these methods constituted my research data. On the one hand, those methods are commonly adopted in ethnographic research. On the other hand, the decisions were made according to my status and my understanding of the institutional culture. I will discuss them respectively as follows.

3.5.3.1. Participant-observation
Because ‘The potential for misunderstanding and inaccurate observation increases when the researcher remains aloof and distanced physically and socially from the subject of study’ (Jorgensen 1989: 56), my primary method of gathering information was to observe the institution under study through active participation. I was socially and physically involved in the setting through direct experience and observation for two years (Jorgensen 1989: 94).
My immersion reduced the possibility of inaccurate observation and misunderstanding because I gained, through a high level of personal involvement, a direct access to what the teachers thought and did from multiple perspectives.

For instance, in summer 1994, I first visited the UK for short-term study, but I wanted to seek formal approval from the management on my overseas study during summers in the following years. I personally applied to the principal and the director of the Personnel Office for their approval at the end of December 1994. This gave me personal experience of the implementation of policy (see case study one in Chapter Five). To understand teachers' positive and negative responses towards the use of a new computer/language lab, I participated, together with another 8 English language teachers, in the CALL seminar on December 11, 1995. A copy of the schedule is given in Appendix 3-1. To understand how the early adopter (i.e. teacher B) performed in class using computers, I observed his lesson on April 8, 1996. In fact, the teachers in the institution under study were not familiar with research procedure and research work. It was not easy for me or anyone else to observe them and reveal their teaching practice (also see 3.5.3.3. and 3.5.3.4.). However, teacher B was a newcomer and just returned from the USA. He was confident of the use of computers, so he allowed me to observe his lesson using computers. A copy of the observation note is given in Appendix 6-2. However, although total immersion facilitated my understanding of the subjects under study, I had to overcome two challenges throughout my field work.

First, I had to develop the relationship — rapport combined with objectivity. That is, as mentioned earlier, I had to look at the observed from both emic and etic perspectives (Fetterman 1989: 30-32). Although I might succeed in building rapport with other English teachers, at the same time, there was a danger of 'going native', i.e. 'over-rapport', which would lead me to bias and
subjectivity. So, I had to be very careful to avoid 'over-rapport' and guard myself against bias throughout my field work. For instance, when many English teachers started to complain about the impracticality of computer/language lab and were unwilling to use it, all remarks I had collected were negative against the project. In quest of a balanced report, I realised I had to search for the perspectives of the decision-makers to ensure that I covered all angles and presented the whole picture. Because someone of my status could not have direct contact with the decision-makers, i.e. administrator X and administrator Y, I started to dig out the inside information by targeting informants who were in charge of the matters concerned. They were assumed to know about, more or less, the details. I made several visits to the library and often went out with the librarians for lunch to build up a relationship with them. My close relationship with these highly-relevant informants who worked in the library benefited me a lot. I understood that it was important to make effective use of the relationships I used to establish with informants in the field for eliciting data (Dean, Eichhorn, and Dean 1969: 20). Because the innovation project of computer/language was administered by the library, the remarks and direct experience by administrator D in the library fortunately revealed very useful inside information concerning the decision-making process by the authorities. Eventually, I obtained the perspectives of both the people in charge and the English teachers towards the same event.

Secondly, I had to be highly aware of the impact of the distorting influences caused by affective participation throughout my field work. Since a human as an instrument for gathering data is necessarily involved in the researchers' affective responses (see Neuman 1997: 355; Schwartz and Schwartz 1969: 99), I had to admit that my personal feelings towards the field events, either positive or negative, appeared in my field notes, too. For example, I had to admit that my personal experience in seeking approval for study overseas from the principal and administrator X was disappointing, and such affective
responses appeared in my field notes. This is what Schwartz and Schwartz describe (1969: 99),

Since the investigator has control over neither his affective responses nor their effects on his observations, he must contend with his feelings as part of his data.

The literature reveals that other researchers also treated their affective involvement as part of field data. For example, Karp (1973, 1980 in Neuman 1997) reveals his personal feelings of tension in his study of pornographic bookstores. He points out that we cannot examine the subjects if we avoid writing about our personal reactions and feelings. Neuman (1997: 354) also agrees with him and mentions that those personal, subjective experiences and feelings towards field events are 'valuable both in themselves and for interpreting events in the field.' Jorgensen (1989: 64) also has similar point. However, although they admit the impact of the affective feelings, they all emphasise the importance of counteracting the distorting influences and use them as an opportunity for reflection and insight. Neuman (1997: 354) has mentioned,

The researchers' own surprise, indignation, or questioning then may become an opportunity for reflection and insight.

Therefore, I also had to convert such distorting influences into an opportunity for reflection and insight by increasing my awareness of them throughout my field work. As Schwartz and Schwartz (1969: 99) remind us,
Only by increasing his [the researcher's] own awareness of them, their bases, and their effects on him will he be able to counteract their distorting influences.

The strategy for me to detach myself from the field site and increase my awareness of such distorting influences was to leave the field (i.e. leaving the institution under study) for a while at intervals (usually two months in summer and winter each, i.e. July, August 1994; January, February 1995; July, August 1995; January, February 1996), as suggested by Neuman (1997). During these intervals, I stayed in Britain to play a single role, a reflexive research student. My temporary withdrawal proved to be very helpful to comprehend what I had observed and, at the same time, to build 'an attitude of strangeness' (Neuman 1997: 354). The useful comments from my supervisors and other research students greatly helped me with a more reflective, critical analysis. While I was in Britain, I was socially, physically, and emotionally distant from the field site. I was as if a stranger, reflecting on all the data gathered and 'mediating the two worlds' (Agar 1986: 19). This 'back-and-forth' shift (Schwartz and Schwartz 1969: 98) was very beneficial to developing my marginality. After returning to the field site, I found myself starting to 'see the ordinary in a new way' (Neuman 1997: 354) and to generate fresh insights 'out of this marginal position of simultaneous insider-outsider' (Hammersley and Atkinson 1983: 100).

3.5.3.2. Documents

The documents provided very useful complementary sources of information in this study because 'These materials were extremely useful in providing unobtrusive support for and illustrations of findings derived from participant observation and interviewing' (Jorgensen 1989: 92). These were official, administrative records pertinent directly to the setting (scene), including
copies of the minutes of the English teachers’ meetings, copies of the teachers’ written syllabuses, a copy of library stock list regarding English learning/teaching, a copy of the requirements for equipment and facilities in English learning/teaching, and selections of school newsletters and school reports. As an insider of the institution, I was entitled to get access to these documents relevant to the innovation projects. They all helped illustrate the dynamics of the college under study and its larger society in the course of the innovation process. They also enhanced and enriched my findings.

3.5.3.3. Questionnaires
(1) The questionnaires of the first type
The purpose of the questionnaires of the first type was to elicit information from students about their viewpoint on teachers’ teaching procedure in English lessons in order to get a picture of how far the current classroom practice conformed to the communicative principles underlying the textbook I call C (see Chapter Seven), in terms of the role of learners, the role of teachers, the role of materials, and classroom activities, etc. Because the institution under study is situated in a small rural town and the teachers did not have previous experience of observing each other’s classrooms, they might be afraid of being observed or unwilling to reveal their teaching practice. Therefore, it was difficult for me to observe teachers in class. To obtain a picture of their teaching procedure under the institutional culture, it was the easiest to elicit information from students. Students’ perceptions would help uncover teachers’ teaching procedure. The students questioned were introduced by the two students I knew before. They were willing to fill in the questionnaires for consecutive four weeks between March 6, 1995 and April 1, 1995. They were asked to answer the open-ended questions regarding the ‘factual description’ of the teaching procedure in details. Because the questions were nothing to do with likes or dislikes, without involving personal preferences, the possible source of bias in using volunteers who may have been exceptionally motivated students and
therefore provided one-sided information extremely favourable for English learning would be unlikely to occur. However, to avoid the possible bias arising from the perception of one single student, I was aware that it would be better to collect as many students' perceptions from each group as possible. The decision to have 7 students from each group was made because the two students who helped me to find volunteers told me that they could not find more than 7 volunteers to participate for four consecutive weeks. The decision to have two teachers observed by their students was made to minimize the possible source of bias in using one single individual teacher. Therefore, the questionnaires of the first type involved a total of 14 students from two groups taught by two different teachers (teacher R and teacher L), i.e. 7 students from each group of each teacher.

I administered the questionnaires to two groups of students each week, spanning four consecutive weeks. Because students took English lessons twice each week, they had to complete two questionnaires each week, i.e. 14 students had to complete 112 questionnaires within four weeks. To let students fully understand the questions, all questions were written in Chinese. To let students freely express their opinions about their current textbooks, all questions were open-ended questions. The text of the questionnaire in Chinese and English is given in Appendix 3-2. Because the questionnaires were not administered in class, the response rate was not 100%. 98 questionnaires out of 112 were returned.

(2) The questionnaires of the second type
The decision to administer the questionnaires of the second type was made to elicit information on how students regarded their current textbooks: textbook B and textbook C (see Chapter Seven). Because English language teachers had different opinions on textbook B and textbook C, learners' opinions would help resolve the differences. Unlike the questionnaires of the first type, the questionnaires of the second type were to elicit information about
students' like or dislikes of the textbooks in use. To avoid the possible source of bias in using volunteers who may be exceptionally motivated students and therefore offer bias opinions, the questionnaires were administered to a whole class of students each time, with an attempt to involve mixed levels of students in English. The second questionnaires involved a total of 153 students from my classes, and they were conducted between June 17, 1995 and June 22, 1995. Students were told that the data they gave would help me understand whether the textbooks in use were appropriate or not. Students were given 30 minutes before the end of lessons to complete the questionnaire. They were given an explanation about the purpose of completing the questionnaire, and they were also given the right not to complete it if they did not want to. As in the questionnaires of the first type, to let students fully understand the questions, all questions were written in Chinese. To let students freely express their opinions about their current textbooks, most questions were open-ended. The text of the questionnaire in Chinese and English is given in Appendix 3-3. These questionnaires were conducted in class, so the response rate was nearly 100%. 151 out of 153 were returned.

3.5.3.4. Informal conversations and casual questioning

Casual questioning and ordinary, everyday conversations also constituted my data. Informal conversations and casual questioning were adopted for several reasons. First, as mentioned earlier, as a result of the institutional culture, most teachers did not seem to be open to researchers and they might be afraid of revealing their real opinions. The decision to adopt such methods was made to make my questioning unobtrusive so that I could gather more detailed information. Secondly, staff working at private-enterprise institutions in Taiwan do not have the same level of security as those at state institutions, so my subjects might be afraid to reveal their own reactions or opinions for research investigation. Therefore, informal conversations and casual questioning were ways to create a casual
atmosphere to get access to data without threatening informants. These are fragments of chat about some interesting topics or stories that emerged at times when people were free to talk about anything. All English teachers as well as other administrators were my potential informants.

Collections of the divided opinions among participants helped me investigate their different attitudes towards the same event. For example, in the event of the computer/language lab, I sensed the problems emerging from the conflicting views between English teachers and the management. I wondered what factors made a well-intended project fail to bring forward improvement and development and what actions the teachers/the authorities were going to take to resolve the problems of the computer/language lab eventually. To answer this series of questions, I realised subsequent inquiry needed to be done. To understand why the authorities changed the plan from an audio/video lab to a computer/language lab, I made a visit to the library on March 2, 1996 and casually questioned administrator D who also dealt with this plan (see Excerpt 6.1. in Chapter Six). To elicit information about teacher A's experience in acting as a message-transmitter in the event of the computer/language lab, I questioned her casually on March 2’96 in the copy room (Excerpt 6.7. in Chapter Six).

Sharing the same office with 9 English language teachers and socialising with them gave me an advantage to develop closer interactions and have more direct involvement with them in a natural way. I chatted, joked, discussed, and exchanged information with them and other potential informants to the greatest extent. This was the most beneficial practice for my eliciting data in the entire research process. Although my descriptive questioning tended to be non-directive and open-ended, which made the speakers free to describe the people, place, and event, etc., often directive questions were required, too. I had to make subsequent inquiry to direct the speakers into the exact point that was highly relevant to my research interest
when what was said was insufficiently detailed or concrete. On the other hand, I did not always succeed in gaining highly relevant and detailed information from the informants. If I failed, I realised I had to suspend our conversations or change the topic, so I would not look very offensive and aggressive. In other words, I had to avoid being offensive and patronising others during conversations. In doing so, I also eased myself in the field at an appropriate pace and thereby avoided rebuff by blundering into delicate situations or subject matter (Dean, Eichhorn, and Dean 1969: 22-23).

3.5.3.5. Field-note methods
3.5.3.5.1. Note-taking
(a) Informal conversation and casual questioning
Because teachers' remarks were so spontaneous and unpredictable, they occurred at any time and any place, so I often scribbled short, key words and phrases, either in Chinese or English, on any convenient items at hand immediately after the conversations were over. I found myself improving in taking quick notes from the experience over a few months. Most casual conversations relevant to research problems were quite short and incomplete, which allowed me to translate them from my notes immediately into English and key into the computer at the end of the same day.

However, there were a few long remarks. For instance, I was very impressed by teacher O's critical remarks made on May 17, 1996, partly because her remarks on materials presented quite different viewpoints from teacher N's and partly because she also expressed her dissatisfaction with several existing pedagogical issues. This happened when I casually questioned teacher N about the use of textbook B in the English teachers' office. Teacher N and I had about three years' experience of teaching each. Teacher N insisted on retaining textbook B because it served moral teaching (see 7.3.4. in Chapter Seven). Teacher O, with more than ten years' experience of teaching, overheard our conversation and then expressed her
different opinions. I noticed that teacher O's remark was rather long. To avoid composing the notes simply from memory, I took notes while teacher O was speaking. I immediately grabbed a piece of paper and jotted down the key points while she was speaking. To make my note-taking less obtrusive to her. I told her that her opinions were very valuable and helpful to inexperienced teachers like me. I also told her that these valuable opinions were too many to remember, so I needed to note down key words. In saying so, I intended to make her feel easy and comfortable with my note-taking. Because my desk stood next to hers, we had very frequent contact at daily work (e.g. she often gave me a lift back home). This was extremely helpful in making her willing to express her opinions and feel comfortable with my casual questioning and note-taking. As usual, I translated from my note into English and immediately keyed into the computer at the end of the same day. To make sure what I had noted down genuinely reflected what teacher O meant, the following day, I checked with her just in case of misinterpretation.

Another example was teacher P’s remark on textbook C on May 18, 1996. I asked her what made her think textbook C was too easy. Her remark was not really long, but I took notes while she was talking. I told her that I needed to take notes in order to avoid misunderstanding and misinterpretation. Teacher M’s remark of June 5, 1996 regarding textbook selection (see Figure 7.1. in 7.3.4. in Chapter Seven) was rather long. I asked her the reasons for choosing the textbooks to be used in the academic year 1996. I took notes while teacher M was speaking. I wrote down the process of textbook selection and the reasons why those books were selected.

(b) Staff meetings and English teachers' meetings
I took notes during staff meetings, e.g. tutor meetings, extraordinary meetings, and English teachers' meetings. Because the messages conveyed in those meetings were about the institutional policies, it was normal and
common for many participants to note down what the speakers said. Therefore, my note-taking was all right in those occasions. I wrote down the key words and phrases of each speaker while s/he was speaking, and then made a full minute on the same day of the meetings. Because some of my colleagues also conducted note-taking as the meetings proceeded, I borrowed their notes and then compared theirs against mine.

(c) One-day CALL seminar and teacher B’s classroom performance
On December 11, 1995, I participated in the one-day CALL seminar with another 8 teachers. In the afternoon, the host institution held a 90-minute workshop in the computer/language lab from 1:30 pm to 3:00 pm. Like many other participants, I noted down the procedure as the workshop proceeded (see Appendix 6-1). When I returned to home, I translated from my note into English and immediately keyed into the computer on the same day.

To understand how the early adopter (i.e. teacher B) performed in class using computers, I observed his lesson on April 8, 1996 (see Appendix 6-2). Because teacher B was the only one who knew how to operate the software and hardware, I asked him to teach me. Because he was a newcomer and had not established a close relationship with other colleagues, only teacher P and me were invited to observe his lesson. Teacher P and I stood behind the whole class. I wrote down the procedure as the lesson proceeded. When I returned to my office, I translated from my note into English and keyed into the computer immediately.

3.5.3.5.2. Translation
Because the thesis was written in English, but the collected data were in Chinese. To avoid possible misinterpretation and gather multiple perspectives of the situation being studied, it was necessary to have the third party to cross-check Chinese-English translation (Burn 1999: 163; also see
Therefore, I had two friends of mine, one of whom had studied in the UK for two years and the other in the USA for nine years, cross-check the texts of Chinese-English translation in the two types of questionnaires and in the minutes of meetings. They were both good at Chinese and English. In practice, we inevitably encountered difficulty in translating some Chinese words into English. For example, in an extraordinary meeting, the principal used Chinese phases ‘觀望的態度’ to describe his strategy adopted for system transformation (see 4.5.2. in Chapter Four). If ‘觀望的態度’ is translated word for word, it will be ‘the attitude of watch and expect’, which is not understandable. After our discussion, we decided to use ‘wait-and-see attitude’, instead of literal translation.

Another example was from the translation of questionnaires. In the questionnaires of the first type, one student used ‘我上課很用功’ to describe his learning attitude in class (S(b)/Group B, see 7.3.5. in Chapter Seven). We found it difficult to translate because of its unclear meaning. Because the literal translation for this is ‘I studied very hard in class’, but this did not give a clear description of what this student exactly did in class. To ensure we really understood his meaning, I went to talk with this student. Finally, we decided to change the translation from ‘I studied very hard in class’ to ‘I listened carefully to the teacher and did what she told me to do in class’, which was exactly what this student meant.

3.5.4. Length and place of study
I conducted the data collection over four academic semesters, i.e. two academic years (the end of August 1994 – the end of December 1994; the end of February 1995 – the end of June 1995; the end of August 1995 – the end of December 1995; the end of February 1996 – mid June 1996). Decisions on the sequence of data collection were made according to the time available and the development of my research skills. Among a variety of data sources, I started with collecting data that were publicized to all
members of the staff, including school reports and school newsletters from the beginning of the research study in August 1994. At this stage, I was not confident of the research skills and stressed by my own teaching and research work, so it was easiest for me to collect such data. I also took notes in the English teachers' meetings and collected the minutes of English teachers' meetings. Then, after I gradually developed confidence in my research skills, I was more able to manage my time between teaching and research.

At the end of February 1995, I was interested to know the teaching procedure of other teachers using textbook C, which contained communicative components. During the week before March 6, 1995, the questionnaires of the first type were given to the two students I knew before in classroom corridor. They passed these questionnaires on to their classmates who were willing to fill in the questionnaires during the period between March 6, 1995 and April 1, 1995. On April 1, 1995, the two students returned to me the questionnaires in classroom corridor. Because the information collected from one single week might not be representative of teachers' habitual behaviour in class, the duration of the questionnaires of the first type spanned consecutive four weeks. After the collection of the questionnaires of the first type, I was also interested to know students' opinions on all their textbooks in use. Therefore, I decided to design another questionnaire to elicit opinions from students. The questionnaires of the second type were given to students during the period between June 17, 1995 and June 22, 1995.

At the end of February 1996, I moved on to the collection of staff chats (see Figure 3.1. below). Collections of informal conversations and casual questioning were written immediately at the end of the same day (see 3.5.3.4. above). Most of them were collected in the English teachers' office. However, other parts of the school building were also valuable: the principal's office and the library. Corridor, the photocopy room, and other
teachers’ offices were valuable locations where offered a casual atmosphere.

After leaving the field site, i.e. quitting the job as a teacher, I began to assign the meanings to the ethnographic data collected -- data analysis.

Figure 3.1. Time line for data collection

<table>
<thead>
<tr>
<th>Aug-Dec</th>
<th>Feb-June</th>
<th>Aug-Dec</th>
<th>Feb-June</th>
</tr>
</thead>
</table>

(Collection of field events in participant-observation)  
(Collection of documents)  
(Questionnaires)  
(Collection of informal conversations & casual questioning)

3.5.5. Presentation of data

In the course of the research procedure, I found it very useful to use computer and word processor to create field notes. These enabled me to copy materials, re-arrange them, and manipulate them for particular analytic purposes when necessary. In doing so, my field notes took a variety of forms for different analytic purposes (Neuman 1997: 363-366). They were direct-observation notes and inference notes. In the direct-observation notes, the field events and staff chats were recorded in the order in which they occurred, including the date, time, setting, and the people. The inference notes covered my reflection and inferences on such events. My inferences following field events were intentionally typed in bold to make
them noticeable. The documents were copied and stapled together in chronological order, too.

3.5.6. Data analysis:
My data analysis involved an analytic cycle in which I broke up research data into manageable pieces or units and reviewed them over and over. Broadly speaking, this analytic cycle included three stages which began from the moment I collected data in the field and ended with the last word in the ethnographic report (Jorgensen 1989: 115; Fetterman 1989: 88). These collected materials were examined for significant patterns, relationships, processes, and sequences, etc. (Jorgensen 1989: 110), in connection to ideas derived from the literature.

At stage one, I collected the field data which consisted of detailed, concrete descriptions of the field activities and their contexts relevant to the 'foreshadowed problems' of the research (Hammersley and Atkinson 1983: 145). By reviewing the direct observation notes, I became mentally familiar with the processes and sequences and perceived the cohesion of the whole events, including the cause and the effect.

Then, I moved to stage two where I made the 'researcher inference notes' (Neuman 1997). The inference notes were something in which I applied my own interpretation to infer and figure out what the specific field event meant. They contained my suspicions, questions, and criticism towards the specific event. I drew inferences upon re-reading direct-observation notes and assigned them social meaning. Because the meanings of actions are not self-evident, making inference is needed to allow them to arise (ibid.). In the mean time, in order to trace the links between each event so that certain significant patterns of behaviour and hypotheses could be created, I found it necessary to re-organise the field events into separate files according to their theme, not in the order they occurred: textbook change, computer/language
At the final stage, I interpreted those findings in connection to the literature and developed new concepts and theory for the full presentation of the case study. When dealing with the massive data, theory, and observation, I found myself confronting a vast array of complex information and had to construct the meanings out of it piece by piece. This is what Jorgensen (1989: 107) mentions,

The aim of this process is to assemble or reconstruct the data in meaningful or comprehensible fashion. In making sense of the data, you are engaged in theorizing -- the construction of meaningful patterns and organizations of facts. A theory is an arrangement of facts in the form of an explanation or interpretation.

Anyhow, it was very interesting to see my perspectives changing every time while I was reading all notes over and over. As time went by, I was gradually able to look at the events with a distance and insight and interpret them on a even higher level. I also found it very useful to have the second or third person to read through my notes. Their questions and comments positively increased my carefulness for field explanation and interpretation. In particular, the critical comments from my supervisor greatly helped me with developing ‘marginality’ and reducing subjectivity (Hammersley and Atkinson 1983: 97).

3.6. Ethical dilemmas:
Although the only value that is central to research is truth (Hammersley and Atkinson 1995), I also faced ethical dilemmas while I was striving to produce true accounts of social phenomena. In fact, ethical issues always surround social research, just as those in any other form of human activity (ibid.).
Several ethical issues below have been taken into account and widely discussed in social research. I have to emphasise that I was fully aware of such ethical issues and made every effort to resolve them throughout the research process.

3.6.1. Informed consent
In this ethnographic research, the researched subjects were not fully aware that research was taking place. However, most informants learned about my regular visits to the university in the U.K. for research work. Some of them were aware of my research work from my behaviour, such as collecting questionnaires. Although the researched group was not informed of the exact research focus, three informants understood I was doing research and encouraged me and even helped me with the document collection when necessary. This model of research in which ethnographers did not obtain informed consent from ‘all’ informants is so-called ‘semi-covert research’ (Barmada 1994). This model can be seen in Barmada’s ethnographic research. She conducted a semi-covert research because she considered that the research context would be distorted if the teachers knew that they were being observed (ibid.: 129)

As in Barmada’s work, to carry out an unobtrusive, casual questioning and minimise the influence of the researcher on what the speakers would say, particularly in a delicate context, it was the most appropriate if the teachers did not know they were being observed. Semi-covert work was helpful to avoid misinformation when I had opportunities to observe and share confidential information (Neuman 1997: 357; Jorgensen 1989: 60). In this research context where people had very limited knowledge of and experience in ethnographic method, informants might feel that the work was intrusive and disruptive, as they were afraid that anything they said or did would be taken down and used as data. As a result, they might cautiously avoid critical opinions and be inclined to give ‘neutral’ answers. The method of
collection would invalidate the research (Hammersley and Atkinson 1995).

In reality, ethnographers rarely tell 'every' thing to all the informants they are studying even when they conduct overt research (ibid.). The degree of openness to the informants varies in different overt research. Hammersley and Atkinson (1995: 265) have mentioned that,

... it is worth emphasising that within the same piece of research the degree of openness may vary considerably across the different people in the field.

Moreover, what constitutes free consent is another question faced by overt research. In many cases, a forcing of consent occurs in overt research (ibid.). When researchers attempt to persuade an informant to be interviewed or observed, their behaviour actually constitutes a subtle form of coercion, not a free consent (ibid.). Take my personal experience for example. I was obliged to accept to be researched when the researcher, a friend of mine, invited me to dinner first, then started to persuade me to be his research subject after dinner.

As mentioned in the very beginning, I was making every effort to resolve the ethical issues. My principle of dealing with the collected data was to protect the researched. Therefore, I did all I could to anonymise everything. For example, I anonymised the location, the institution, and the informants. I changed the specialised departments. I changed informants' gender. Such efforts were suggested by Dr. Adrian Holliday, an experienced ethnographer, through personal contact. All I did was to protect the informants and avoid pointing fingers at individuals or individual institutions.
3.6.2. Privacy
Because ethnographic research studies the private, tacit thoughts, actions, and culture, it may have the danger of invading privacy. However, since I was an insider, a natural part of the setting, I observed and noted down what surrounded me, what happened to me, and how I interacted with other participants in a natural way. Unlike outsiders, I had access to the data around the setting without invading their privacy. Furthermore, I was not a westerner, so I did not have the danger of cultural imperialism to disrupt cultural patterns among the researched (Holliday 1996: 247). Because I was one of the powerless, like many participants, I could not entangle the researched in the ‘researcher-dominated research discourse’ to manipulate the powerless for the sake of academic gain in data collection (ibid: 248).

3.6.3. Harm
As mentioned earlier, my principle of dealing with the data was to protect the researched and avoid pointing the figure at individuals or individual institutions. Therefore, my principle of data analysis was not to make very strong claims on the basis of ethnographic data, but to present the different voices from the perspectives of the teachers. In other words, I was trying to illuminate a general state type of state of affairs rather than to produce any form of vendetta and do any harm to the researched. This careful attitude towards ethnographic data was also suggested by Dr. Adrian Holliday through personal contact. In short, like many other ethnographers, I was trying to ensure that ‘the knowledge produced by research is used in pursuit of good, and not of bad, causes’ (Hammersley and Atkinson 1995: 273).

3.7. Issues of validity and reliability
Ethnography is one of several research methods available to social scientists and has given a considerable contribution to the understanding of the perspectives of the people under study. Unlike quantitative researchers who require the data to give one single, objective truth, field researchers collect
the data in which all informants subjectively interpret experiences within a social context (Neuman 1997: 368). Because ethnography does not emphasise the 'scientific testing role' like other quantitative methods, it receives criticisms for its lack of reliability and validity (Agar 1986: 11-12).

In fact, Ethnographic research intrinsically possesses certain kinds of validity not ordinarily possessed by non-qualitative methods (Kirk and Miller 1986: 30-31). Agar (1986) has argued that so-called 'received view' of science, a view that centres on scientific testing, does not fit the details of the research process in ethnography very well. This is because:

Ethnographers set out to show how social action in one world makes sense from the point of view of another. Such work requires an intensive personal involvement, an abandonment of traditional scientific control, an improvisational style to meet situations not of the researchers' making, and an ability to learn from a long series of mistakes. (Agar 1986: 12)

Due to the different purpose and nature of ethnography from other quantitative methods, the issues of reliability and validity can be viewed from different perspectives.

3.7.1. Validity:
The issue of validity is definitely not a limitation of ethnographic research. Kirk and Miller (1986: 21) have argued that the aspect of perfect validity is not theoretically attainable in either qualitative or non-qualitative research because no experiment can be perfectly controlled and no measuring instrument can be perfectly calibrated. This suggests that all measurement seem to be some degree suspect. Even scientific research will have a degree of subjectivity (Barmada 1994: 131). 'Scientific' research is
subjective in its choice of what to measure and which conditions to control.

In fact, Kirk and Miller (1986: 21) have mentioned that the issue of validity in the case of qualitative observations is a question of whether the researcher sees what s/he thinks s/he sees. Neuman (1997: 369) describes validity in ethnographic research as:

...the confidence placed in a researcher’s analysis and data as accurately representing the social world in the field.

These suggest that the validity of ethnographic research lies in researchers’ own developing judgement and understanding, as the research proceeds. However, instead of leaving conclusions to strong impressions, Fetterman (1989: 40) suggests that it is necessary for field workers to define their methods of measurement and identify or quantify their source of ethnographic insights whenever possible. As guided by these perspectives, therefore, I took several steps regarding the issue of validity as my field work proceeded. For example, I carefully avoid disturbing the complex scene and took the totality as my data base to achieve ‘ecological validity’ (Neuman 1997: 369). That is, the events described were undisturbed by my presence or procedure. I also noted down my research procedure in details to present a ‘natural history’ (ibid.). I made a detailed description of how the project was conducted. I specified how I arrived at my conclusions, so others had something concrete to go on and something to prove or disprove (Fetterman 1989: 40). I talked to several research students and explained to them how I proceeded my research. I tried to make a full and candid disclosure of my actions, assumptions, and procedures for others to evaluate (Neuman 1997: 369). Their useful comments increased my carefulness with my observations. Their advice helped me to monitor my subjectivity.
3.7.2. Reliability
In field research, it is unlikely that we can reproduce the same result and achieve complete reliability because the social events and context will change and the members will be different (Neuman 1997: 369). It is hard to replicate field research when we study a world of changing people and situations. Regarding reliability in field research, it is necessary to look at members and events from different angles (ibid.).

In this study, I found there were three things to be done regarding the reliability. Because most of my data depended on what members told me, what was said might not be truly sufficient. I had first to fit together the scattered pieces of events into a coherent picture by digging out more relevant information, such as the minutes of staff meetings and official documents, etc. Secondly, I collected opinions from the informants with conflicting perspectives, from which I could sense the problems emerging from the conflicts. In doing so, I also avoided the danger of 'over rapport' and bias, as discussed earlier. Thirdly, I tried to make the observations verified or cross-checked with other, divergent sources of data (Neuman 1997: 368). I had to obtain more than one source of data to increase the reliability of research findings (Wallace 1998: 36). Instead of investigating one single case study, I looked at three case studies in order to obtain a fuller picture of the innovation process. So I utilised all possible access to relevant data from many different informants who were involved directly in the field events. I checked whether the informant was in a position to know the events so that I would not be given misinformation. Since I was an insider for years, it would be less difficult for me to find out who was the right person to give relevant information. As noted in 3.5.3.5.2 above, I also had two friends of mine, one of whom studied in the UK and the other in the USA, cross-check the texts of Chinese-English translation in the two types of questionnaires and the minutes of meetings. The aim of
'triangulation' (Burn 1999: 163) is to avoid possible misinterpretation and gather multiple perspectives of the situation being studied. All the efforts I made were to enhance the reliability of my research findings.
Chapter Four  Setting the scene

4.1. The wider educational system
As I concluded in chapter one, the issues of innovation are highly context-specific and sensitive and we will never innovate without reference to the wider context. In other words, if we want to implement an innovation, it is important to first understand the wider context where this innovation is going to be located, so that we are able to manage the mechanisms that are likely to arise from the implementation process. The data sources for sections 4.1, 4.2, and 4.3. mainly came from the official information, the Ministry of Education (English version) on the internet.

The current structure of educational system in the country under discussion has five levels, as shown in Table 4.1.: level 1 -- kindergarten, level 2 -- primary school, level 3 -- junior high school, level 4 -- senior high school, and level 5 -- university (see Table 4.1. below).

After students complete their schooling at level 3, they will often have to take entrance examinations or go through special selection schemes for further study. There are two systems at levels 4 and 5: academic education system (see table 4.2. below) and technological-vocational education system (see Table 4.3. below).
Table 4.1. : Structure of the educational system in Taiwan

<table>
<thead>
<tr>
<th>(Level 1.)</th>
<th>(Level 2.)</th>
<th>(Level 3.)</th>
<th>(Level 4.)</th>
<th>(Level 5.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-7 years olds</td>
<td>7-12 years olds</td>
<td>13-15 years olds</td>
<td>16-20 years olds</td>
<td>18s-20s years olds</td>
</tr>
<tr>
<td>kindergarten</td>
<td>primary school</td>
<td>junior high school</td>
<td>senior high school // senior vocational school // junior college</td>
<td>university // senior vocational school // university of technology</td>
</tr>
</tbody>
</table>

4.1.1. Academic educational system (AE)
Students who would like to go for general education will choose senior high schools (three-year programs). After that, they have opportunities to enter universities (four-year programs) to obtain degrees by means of joint entrance examinations or special selection scheme.

Table 4.2. Academic educational system

<table>
<thead>
<tr>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>senior high school</td>
<td>university</td>
</tr>
</tbody>
</table>

4.1.1.1. Senior schools
There were 217 senior high schools in the 1996-1997 academic year, around 50% of which were public. Most high-school graduates will enter universities through joint entrance examination, and some through a scheme of special selection. 58.88 % of graduates in the 1996 academic year went to further study on completion of their school education.
4.1.1.2. Universities
There were more than 50 universities in the 1996-1997 academic year. Courses last for four years, except for some courses which need longer study, such as medicine, etc. Universities have undergraduate, master’s and doctoral programs.

4.1.2. The technological-vocational educational system (TVE)
Here I will focus on the TVE system because the institution studied later is located in that sector. Compared to the academic educational system, the TVE system seems to be less simple because it covers more programs.

The technological-vocational educational system consists of senior vocational schools, junior colleges, and institutes/universities of technology. After junior high school, students who decide to receive the technological-vocational education will choose senior vocational schools (three-year programs) or five-year junior colleges after completing junior high schools. After that, there are opportunities for them to go to institutes/universities of technology to obtain degrees.

<table>
<thead>
<tr>
<th>Table 4.3. Technological vocational system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 4</td>
</tr>
<tr>
<td>Senior vocational school</td>
</tr>
<tr>
<td>(three-year program)</td>
</tr>
<tr>
<td>/junior colleges (two-year program,</td>
</tr>
<tr>
<td>three-year program,</td>
</tr>
<tr>
<td>and five-year program)</td>
</tr>
</tbody>
</table>

4.1.2.1. Senior vocational schools
The first tier of the TVE system – the Senior vocational schools -- was developed starting in the 1950s by the government with the purpose of equipping people with entry-level technical skills. In the 1996-1997 academic year, there were 204 senior vocational schools, 48% of which were
public. They offer a wide range of subfields: agriculture, commerce, home economics, marine production, nursing, industry, art, etc.

Senior vocational schools have various programs: day-time programs, evening programs, co-operative education programs, technical programs, special programs, and supplementary programs. 17.71% graduates in the 1996 academic year went on to further study on completion of their study. Compared to graduates of senior schools in the academic educational system (58.88%, see 4.1.1.1.), this figure indicates that vocational students at level 4 had extremely limited chances to continue their higher education at university level, even if they wanted to go on.

4.1.2.2. Junior colleges

As the country's industrial development progressed, a second tier was added, the Junior colleges, which were developed from the 1960s with the purpose of educating people with mid-level technical or managerial skills. (Internet, as above) The junior college system is divided into three types, two-year, three-year, and five-year programs. The two- and three-year programs at the junior colleges are designed for students who have completed the senior vocational program. The five-year programs are intended for students who have completed junior high school and would like to receive vocational training. No programs at junior colleges confer a degree. There were 70 state/private junior colleges in the 1996-1997 academic year, of which 80% were private and 20% public.

The subfields at junior colleges include: industry, agriculture, commerce, home economics, marine studies, pharmacology, nursing, medical technology, physical education, arts, music, opera, languages, food science, and others. They adopt a credit system, in which students' success is judged by the total required credits they have earned within the period of their study. Students receive a practical training, plus professional knowledge, which is intended
to help them in the competitive job market after they leave schools.

4.1.2.3. Institutes/universities of technology
The third tier of the TVE system is institutes/universities of technology. There has been an increasing demand since the 1970s for people with well-developed managerial and leadership abilities. During this period, the government established the first institute of technology in 1974, but the second one was not founded until 1991. In the 1996-1997 academic year, there were 10 institutes of technology, half of which used to be junior colleges. This figure shows that the government started to expand the TVE at university level by upgrading junior colleges from the mid-90s.

Institutes/universities of technology provide undergraduate, master's, and doctoral programs. Four-year undergraduate programs are for graduates from senior vocational schools. Junior college graduates take two-year undergraduate courses (equivalent to the last two years of the four-year course). Both programs also provide places for those in employment.

4.2. The educational administration system
In general, the educational administration system has three levels: the Ministry of Education (the MOE) at central government level, the departments of education of the provincial and municipal governments, and the bureaus of Education in the city and county governments.

The MOE is responsible for formulating educational policies as well as supervising the operations of all national schools/senior vocational schools/junior colleges/institutes of technology/universities, national social education organisations, and private junior colleges/institutes of technology/universities. The departments of education under the provincial/municipal governments are responsible for implementing the policies from the MOE as well as supervising provincial/municipal schools,
private senior vocational schools, and social educational schools within their administrative territories. The county/city bureaus of education are in charge of county/city educational administration. They also supervise county/city schools, county/city social education organisations, private junior high schools, primary schools and kindergartens.

4.3. Educational reforms
In the past ten years, several academic groups and parents have called for attention to educational reforms. They pointed out the drawbacks of the existing system, such as that students were under heavy pressure from joint entrance examinations. Apart from that, with the national development, technological development, social changes and peoples' changing values, it has become urgent for the government to introduce a series of educational reforms in response to the evolving needs from all parties. The MOE has defined educational reforms as below,

By 'educational reform', we mean that the educational system must accept new educational concepts, revise new contents, adopting new process [sic] to correct the faults of modern education and to adapt to both the needs of subjective and objective environments. When society changes drastically, it is urgent for us to redirect future educational development (Internet information).

Therefore, the government established 'the Association of Educational Reform' in 1994. After in-depth and extensive examination, the Association completed the Report on Educational Reforms, which set up five major directions and eight specific items of educational reforms. Incorporating this report into three other long-term educational plans (i.e. the Report on Aboriginal Education, the Report on Disabled Education, and Educational Prospects for the 21st Century), the MOE launched the Plans of Educational Reform, covering 18 short/mid/long term educational reforms
and 12 action plans.

The educational reforms and action plans covered many programs at all levels of academic and vocational systems, such as the abolition of joint entrance examinations and the extension of compulsory education, etc. They also involved the change of educational law enabling the reforms. There were several reforms which would take a lot of space to describe in details. Here I would like to give a few examples, which were started in the mid-1990s and relevant to the focus of this thesis. In fact, many features like (b) below are world-wide trends.

Reform (a) : higher educational reforms were undertaken in order to move towards a more flexible policy regarding the university system. In 1994, the MOE launched new regulations which offered universities more academic and administrative independence (Internet, as above).

Reform (b) : budget system reform was considered. In 1995, the MOE launched a new law regarding university funds. The new law stated that state universities which used to rely on the government for their total budget had to lessen their reliance on the government. They had to start their own fund-raising plan for part of the budget. On the other hand, private institutions have traditionally relied on tuition fees. In order to ease the burden on students and seek a balance between public and private schools, the MOE has gradually increased the budget for subsidies to the private ones (Internet, as above).

Reform (c) : in 1995, the MOE launched a new law enabling more prestigious junior colleges to be upgraded to university level (i.e. institutes of technology), although they could retain their junior college programs (Internet, as above). Besides, another law was also set up, permitting general universities to run two-year programs (equivalent to the last two years of conventional programs) intended for vocational graduates from
junior colleges (Internet, as above). Doing so would increase the places at university level in the TVE system, thus establishing a second channel towards higher education in parallel with the existing one of the academic educational system (Internet, as above).

The arrival of education reforms will surely have impact on the current academic- and vocational educational systems at every level to various degrees. Because the issues of system transformation of junior colleges are at the centre of the thesis, now I am going to place my focus on the TVE development at university level. It is reform (c) that would have the most direct impact on the TVE system.

4.3.1. The impact of educational reforms on the TVE
As a result of the developments described in 4.1.2. and 4.3., the second educational channel is a consistent TVE system including senior vocational schools, junior colleges, and institutes/universities of technology. The MOE has six short/mid/long term objectives to achieve, and one of them is as follows,

| Moreover, in order to improve access to further TVE, construction of more national institutes of technology and junior colleges is planned and private endowments are being encouraged. Junior colleges are to be upgraded to institutes of technology while retaining their junior college programs, and maximum use will be made of university resources. The two-year system at institutes of technology is to be amended to expand opportunities for study for people in employment, and changes will be made to standards for the establishment of universities, so that institutes of technology offering comprehensive education with an emphasis on science and technology [sic] (Internet, as above). |

It appears that the development of TVE at university level was neglected
before the 1990s, if we judge from the extremely low proportion of institutes/universities of technology. In the reforms, the MOE has been improving the quantity and quality of TVE at university level since the mid-1990s. After the government decreed the agreement in 1995 (see reform c. above), junior colleges faced a new challenge when they started to undertake a system transformation. The process of system transformation from junior colleges into universities will surely require more financial resources, staff numbers, and managerial knowledge from all junior colleges, if we judge from the demands from the MOE. To be qualified as institutes of technology, junior colleges have to meet a bunch of requirements (guidelines) set up by the MOE, such as the improvement of facilities and equipment, number of volumes in the library, classroom buildings, and teacher qualifications and research culture, etc. Each junior college is inspected regularly and its improvement and development are evaluated formally with reference to these requirements (see 4.3.3. below). Since every junior college has its individual characteristics, in terms of school size, staff/student number, facilities, and subfields, etc., the evaluation results are used to direct the planning of innovation projects towards system transformation. As soon as a junior college fulfils the national requirements, it will be upgraded to university level.

4.3.2. Private/state junior colleges
There are private and state institutions at each level of the educational system. At the level of junior colleges, in the 1996-1997 academic year, 80 % were private and 20 % public. In this country, state institutions are very popular among students and therefore demand higher scores for admission. Private institutions, on the other hand, except for a few with prestige, are not as popular as state ones. State institutions attract teachers with higher qualifications partly because of a better pension scheme supported by the government. They also attract students with better academic performance. In short, both students and teachers are inclined to study and work at state
institutions in this country. This might be due to the fact that they receive more resources than private ones from the government to maintain the overall standard. Lately, the government has been gradually increasing the annual budget to assist private institutions, as mentioned in the budget reforms in 4.3. above. The MOE stated that,

We [the MOE] have been trying to seek a balance of resource between public and private schools, to assist the full development of private universities, to supervise the development project of private universities and colleges general affairs [sic], and to give awards and sponsorship according to their performance (Internet, as above).

It is hoped that the budget reforms will enlarge the financial resources of private institutions, which would improve their teaching and research.

4.3.2.1. The rating of junior colleges
As mentioned in 4.1., there are two routes for admission: special selection and joint entrance examinations. The main criterion for admission into junior colleges is the applicant’s score on the joint entrance examination. After the score comes out, an applicant enrols himself/herself in the subject and the junior colleges within which his/her score falls. The higher score a student gets, the better chance s/he gets to enter the subject and the college s/he prefers. This joint entrance system of junior colleges to some extent produces an unofficial rating list among all junior colleges. State institutions tend to receive a high rating due to their popularity. Except for the few prestigious institutions, most private institutions usually stand between a middle and low rating.

4.3.3. The role of inspection/supervision system in system transformation
To give appropriate supervision over individual institutions and improve their overall quality, the MOE conducts inspections at regular intervals. Every
institution will be given an evaluation result in each inspection with reference
to its future improvement. There are two types of inspection: the initial
inspection and follow-up inspection. The former takes place every four
years, then the latter follows two years after the initial inspection. External
inspectors sent by the MOE will visit private/state junior colleges to assess
their current performance and supervise their future development. The
members of inspection teams are mainly academic scholars at universities
and officials at the MOE. They will produce an evaluation result from each
inspection. Based on these evaluation results, the MOE gives awards and
sponsorship to the institution inspected.

After the educational reforms, these evaluation results are also used as the
criteria for system transformation. As described in 4.3.1., the MOE has set
up a list of requirements for system transformation, in terms of qualified
teaching staff with PhD degrees, facilities and equipment, the expansion of
campus and classroom buildings, and number of volumes in the library, etc.
Such demands certainly imply greater investment. In comparison, it is
easier for state institutions to meet these demands because they have
traditionally received more resources from the MOE (see 4.3.2. above).
However, most private junior colleges would have to make use of their
limited resources and look for other assistance as much as they could to face
the big challenge of upgrading.

The institution under study is a private enterprise and has surely encountered
this challenge like many other private ones. Now I am going to narrow
down my focus to the specific context where this ethnographic research took
place. After the presentation of the wider educational context, it is
necessary to have a detailed description of the institution under study.

4.4. The institution under study
The institution under study was launched as a privately funded operation in
the early 1960s. Its general educational objective is skill-oriented in specialised fields, supported by academic theory (Personnel Manual of the institution 1994). It has five specialised departments: tourism, accounting, marketing, business, and architecture (subjects changed for anonymity). It has two- and five-year programs, day-time programs, and evening programs. Students are granted certificates (not a degree) on completion of study. The student population is approximately 5,000 and the scores for admission stand in a middle-low rating. It is located in a small agricultural county and this unfavourable location has always been a barrier to its development and exposure to resources.

4.4.1. The formal/informal structure:

According to the personnel manual of the institution, the structure of the institution includes one committee board, five departments, six administration offices, and one evening course office (see Table 4.4. below). The high-ranking administrators include one principal, and one dean from each department and each administration office. Within this structure, two types of important meeting are to be held to take responsibility for the operation of the institution, in terms of policy-making, administration, pedagogical matters, and other general affairs, etc. Based on the results of the meetings, the institution goes about its daily work at present and in the future. The first one is called general-affair meetings, which are to be held twice every academic semester and attended by individuals selected by the management such as the high-ranking administrators and representatives of teachers elected by the teachers. It covers issues such as the budget, the program plan, and the establishment of institutional regulations, etc. The second one is the administration meetings. They are attended mostly by administrators to discuss administration affairs and related matters, etc. The principal has to chair both types of meeting.

Apart from those meetings, another type of meeting attended by the
"Committee for Teacher Qualifications Assessment" (教師評議委員會) was to be held from the 1990s on, covering issues of the approval of teachers' employment and their further education, and the assessment of teachers' teaching/academic achievement, etc. This group includes the members of the high-ranking administrators, selected representative teachers, and the associate professors (Personnel Manual of the institution: 1994). The principal also has to chair this type of meeting.

The above structure clearly presents the overt process of policy-making and the distribution of responsibilities. It enables outsiders to understand easily how the institution goes about its daily work at present and in the future.

On the other hand, because the institution is a private enterprise, the people who have a close connection with the ownership tend to have a strong influence on policy-making, in terms of administration and personnel, etc. As an insider, I observed that those people constituted an informal structure, presenting a different process of policy-making and different distribution of responsibilities from those in the formal structure. In other words, the formal structure might not represent the reality (Kennedy and Kennedy 1998). Underneath, the informal structure is actually at work. This will be exemplified in our case studies.
Table 4.4. Formal Structure (Based on the Personnel Manual of the institution: 1994)

<table>
<thead>
<tr>
<th>Committee board</th>
<th>Principal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tourism dept.</td>
</tr>
<tr>
<td></td>
<td>Accounting dept.</td>
</tr>
<tr>
<td></td>
<td>Marketing dept.</td>
</tr>
<tr>
<td></td>
<td>Business dept.</td>
</tr>
<tr>
<td></td>
<td>Architecture dept.</td>
</tr>
<tr>
<td></td>
<td>Teaching affairs office</td>
</tr>
<tr>
<td></td>
<td>Disciplinary office</td>
</tr>
<tr>
<td></td>
<td>Bursar office</td>
</tr>
<tr>
<td></td>
<td>Personnel office</td>
</tr>
<tr>
<td></td>
<td>Finance office</td>
</tr>
<tr>
<td></td>
<td>Career advisory office</td>
</tr>
<tr>
<td></td>
<td>Evening course office</td>
</tr>
</tbody>
</table>

4.4.2. Staff

There are two main categories of staff at the college: the administrative staff and teaching staff. The teaching staff are divided into general subject teachers and specialist-subject teachers. The former are those teachers who teach general courses attended by all the students, e.g. English, chemistry, Chinese, and mathematics, etc. The latter are those teachers who teach courses relating to the five different vocational subjects of the institution, e.g. tourism, and marketing, etc. Those courses are attended by their target students only. There used to be four ranks of teaching staff: professor, associate professor, lecturer, and assistant teacher. After 1996, there was a change in ranks of teaching staff: professor, associate professor,
assistant professor, and lecturer. Assistants are no longer given teaching responsibilities. PhD holders can be associate professors or assistant professors, and master's degree holders can be lecturers. They can be promoted to a higher rank by producing a number of academic research publications. In 1996, the institution stated that assistant teachers without master's degrees would be no longer given teaching responsibilities in the following academic year. There are more than 200 teaching staff at the institution. Very few PhD holders work at the institution. Only 19 teachers have PhD degrees (School Report One 1994: 9). The teaching staff is mainly made up of lecturers with master's degrees, up to 82% (ibid.).

4.4.3. English language teaching/learning

4.4.3.1. The role of the English program

The English program is part of the national curriculum. It is a compulsory subject from the first to the fourth year. That is, if students do not have a satisfactory result in the English program, they will not be able to graduate. However, because this institution is business-oriented, its teaching objective is to educate learners to have mid-level skills in the field of commerce, not in English. If we judge from the poor facilities and limited resources devoted to the English program (see 4.4.3.2. below), the management does not seem to pay attention to its development as much as other five specialised programs. The situation is that the English program is administered under the department of general subjects, together with Chinese, chemistry, and mathematics, etc. It does not form a department by itself, so it is not given an adequate annual budget supporting the future development and a course director with a high-ranking status. A representative is selected annually by all English teachers to attend meetings with the management, but s/he is still at the bottom of the power structure, powerless to influence decision-making.

4.4.3.2. The facilities available for language teaching/learning

Here I would like to summarise two paragraphs given from the Teaching
Affairs Office as follows, stating the facilities for language instruction demanded by the MOE.

**Paragraph I**: If there are more than 20 class groups, the institution should establish at least one audio-visual language room, and then add one in every another 20 class groups.

**Paragraph II**: Every English teacher should be given one cassette player for his/her teaching purpose.

(Data source: materials made available by the Teaching Affairs Office, and translated into English by the writer).

However, the real situation is that no audio-visual lab has been specifically designated for language teaching/learning, although there are more than 70 class groups. Cassette players are the only equipment for teaching speaking and listening. A small so-called audio-visual office is available, from which English teachers can borrow cassette players or a limited number of videos for English teaching. Because there is a shortage of cassette players, English teachers have to borrow a player shortly before they start their lesson and return it immediately after they finish their lesson. As far as I observed, not all the English teachers played a cassette in their lesson. Some teachers complained that the noise would travel to the next-door classroom when they played a tape in an ordinary classroom without soundproofing (see case study two in Chapter Six). In short, the facilities for English programs are extremely limited.

4.4.3.3. Communication channels

Not all English teachers can participate in direct communication with the management. The formal communication channel between the management and teachers is through a third party. There are two routes. One route is that all English teachers choose one English teacher as representative who
has to participate in the regular staff meetings (i.e. administration meetings and general-affair meetings) with other high-ranking school administrators (see 4.4.1. above). In those staff meetings, s/he gives opinions on behalf of all English teachers, if any. S/he is also responsible for passing on official messages from the management to all English teachers (see Table 4.5. below). The minutes of such meetings are sometimes publicised in school newsletters.

The other way is through the minutes of English teachers’ meetings. In each semester English teachers are required by the Teaching Affairs Office to hold two meetings, respectively any time during the first week and the last week of the academic semester. Conventionally, the first meeting is for introducing new teachers, if any, or passing on official messages to the teachers by the representative. And the second one is mainly for selecting the textbooks for the coming semester. Teachers can also discuss pedagogical matters with others in these meetings or give opinions, if any. The minutes of the meetings have to be kept in a written form in an officially-designed notebook and then passed on to the dean of the Teaching Affairs Office and the principal (see Table 4.6. below).

However, there are also other kinds of meetings intended for certain specific topics. Some are regular, such as the tutor meetings attended by those teachers who also act as tutors to discuss affairs concerning student life, attendance, and misbehaviour (e.g. Excerpt 4-04 in 4.5.1. below, the same as described in 5.3.4. Feb’96 in case study one). Some are irregular, such as extraordinary staff meetings for any topics when necessary (e.g. an extraordinary staff meeting in 5.3.4. Feb’96 for the introduction of the Five-Year Development Plan in case study one).
Table 4.5.  Formal communication channel a)

- The management
- Representative
- English teachers' meetings

Table 4.6.  Formal communication channel b)

- The management
- The minutes of meetings
- English teachers' meetings

4.4.3.4. Lesson hour, grouping, and class size

Each instruction hour lasts for 50 minutes. Every academic year has two academic semesters. There are 18 weeks at least in every academic semester. The instruction hours vary from students in year one to year four. Students in their first, second, and third year have three instruction hours of English every week. Students in their fourth year have two instruction hours weekly.

There is no grouping on the basis of students' English level. Students of the same specialised subject are in the same class group until they graduate. The class size is generally between 40 and 50 students in one class group. So the English lessons are conducted in a large class with mixed English levels.
The classroom language is Chinese. The assessment traditionally relies on examinations containing no communicative components. Students often have three years' experience in English learning in their junior schooling before they come here.

4.4.3.5. The qualifications of English teachers
There are 16 English teachers in charge of daytime English programs and most of them have master's degrees. Five of them obtained their second degree in TESOL, and the others in various fields, e.g. media education, English literature, and psychology, etc. English teachers do not necessarily have to have teacher preparation education in ELT as long as they hold a master's degree or above. 10 teachers out of 16 obtained their master's degrees in English-speaking countries, e.g. the USA. Nine teachers are aged 30-35, having at least three years teaching experience; three teachers between 36-40 years old, around 10 years teaching experience; two teachers between 40-45 years old, more than 10 years teaching experience; two teachers are over 60 years old, more than 20 years teaching experience.

Every English lecturer has the minimum of 12 teaching hours per week and one hour tutorial at least (if s/he acts as a tutor and is given tutorial responsibilities.) Apart from this, all teachers are expected to work on research, but in reality not many teachers have spent time on research (see case study one in Chapter Five). As indicated by the principal, the lack of research culture was a barrier to system transformation (School Report Two: 1996).

4.4.3.6. Teachers' interaction
I observed that there was a very harmonious relationship among English teachers. The English teachers' office shared by 10 English teachers provided opportunities for effective social interactions. Nine female teachers and one male teacher shared a big office where they socialised with
each other and discussed pedagogical matters whenever they wanted to. I was also one of them in the office. Through daily contact, English teachers developed a relationship of harmony. Among them, certain groups emerged, depending on the frequency of daily contact. As far as I observed, one group of teachers who were about 30-35 years old usually discussed pedagogical matters in their chats and went out for lunch regularly; one small group of teachers (mainly senior teachers) were quiet in the office and did not easily express their opinions. Because the office was not big enough, the other 6 teachers sat around in other buildings and rarely had close interaction with one another due to the inconvenient physical distance.

4.4.3.7. English syllabus

English teachers had to fill in a sheet of paper given by the Teaching Affairs Office in the first week of each semester. They filled in their estimated teaching content with names of textbooks in use, chapter titles and page numbers, etc. In short, this so-called written syllabus was very textbook-driven. No other specific statement regarding teachers' teaching objectives, teaching methods, and syllabus type (e.g. task-based syllabus, structure syllabus, etc.) was made. The format of the paper seems to reflect a conception of ELT held by the authoritative administrators that the page number of the textbooks would represent learners' progress and teachers' workload. One teacher stated that she regarded completion of a textbook as much as possible as her major teaching responsibility (see Excerpt 4-01 below).
Excerpt 4-01

<table>
<thead>
<tr>
<th>(Informal conversation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher O: I have to finish at least half of the textbook within one academic semester. Otherwise, the management might think I did not work hard and my students would complain about the waste of money on buying textbooks.</td>
</tr>
</tbody>
</table>

4.4.3.8. English teachers’ teaching perceptions

Although there are no explicit agreed teaching objectives and method, the teachers’ written syllabuses reflect their different perceptions of language learning and teaching. Through my personal friendship with administrator F who worked at the Teaching Affairs Office, I obtained copies of three teachers’ written syllabuses for the fourth-year students. The fourth-year students used two textbooks, one for conversation practice and the other for reading. Within the 18-week academic semester, including two examination weeks and one-week spring break, teacher P spent 9 weeks (50 minutes per lesson, 2 lessons per week) on conversation practice, and 6 weeks on reading; Teacher O spent 11 weeks on conversation practice, and 4 weeks on reading; teacher L, a senior teacher, spent all 15 weeks on reading. Their different distribution of speaking and reading in class reflects their different teaching emphasis. Some teachers emphasise conversation practice, but some reading.

4.4.3.9. Administrators’ perceptions about English teaching and learning

As mentioned in 4.4.3.1. and 4.4.3.2. above, the management does not highly value the English program. However, several deans realised the importance of English as an international language (Excerpts 4-02, 4-03 below). In their view, proficiency in English would surely increase one’s competitiveness in the job market. They regarded English as important because it was an important tool for students to obtain up-to-date knowledge from English media and communicate with foreigners. They also
complained about students’ low level of English proficiency, which made English teaching more difficult.

**Excerpt 4-02**

(Informal conversation with dean A in the corridor)

Dean A: I always tell my students that English is very important and they have to study harder to build up a good foundation of English so that they can compete successfully in the exams, and job market, etc. But I have to admit that the English level of our students is too poor before they came here to study.

---

**Excerpt 4-03**

(Informal conversation with dean B in the corridor)

Dean B: It is a pity that I am unable to orally communicate with foreigners in English after 10-year learning. Our students are even worse. You English teachers are English experts and should know the core problems and the solution.

The above in 4.4. is the situation and performance of the institution under study, including its structure system (formal/informal), decision-making process, and in particular, its teaching/learning environments for the English program. Now I am going to depict its overall strategies towards system transformation in response to the educational reforms.

4.5. Reactions towards the educational reforms from the institution

4.5.1. Perceptions of the high-ranking administrators

In a tutor meeting of 1996 (see 4.4.3.3.), the principal declared the determination for system transformation (see Excerpt 4-04 below). He stated that the institution had to cope successfully with this educational innovation in order to survive in the future. Each staff member should hold the attitude that if the institution survived in the change, then s/he survived
too. The institution had to be upgraded to university level so that it would not lose its competitiveness. He hoped that no staff would exclude themselves as participants in the education reforms because every one was on the same boat.

Excerpt 4-04

(In a tutor meeting)
The principal: Everybody working here should be hand in hand. All of us want to make this school better and better because we make a living here. If our school can survive from the educational change, then we all will survive, too. We are going ahead towards system transformation. However, to achieve this goal depends entirely on all staff, not our students (Many teachers laughed after hearing this, and I laughed too.). Please do not laugh. I am serious. Only when teachers publish papers or study for a PhD degree, will we be likely to achieve our goal.

4.5.2. Overall strategies adopted
The principal also explained in an extraordinary staff meeting the main change strategy adopted for upgrading. First, the authorities would target the evaluation results from the external inspectors (School Report Two 1996: 1-8). Based on the evaluation results, the school authorities would considerably increase the annual budget for the purchase of library books, journals, and equipment, for the construction of classroom building, for the employment of teachers with PhD degrees, and for teachers' research, etc.

The second element of the strategy was to adopt a wait-and-see attitude in the course of expansion (ibid.). That is, the institution did not have to become a pioneer among all junior colleges. The management would pace itself towards expansion. For instance, it would first observe how other institutions operated their development plan. If they were able to run a new course successfully, then it could follow up to run the same course (ibid: 6).
The third element was to set up a five-year development plan for system transformation (ibid: 19-21). This plan stated that ten tasks were to be completed in following five years. Among all the tasks planned, there were two tasks in relation to English language teaching/learning: a) the planning for and establishment of a language/computer room; b) further education for teachers. It was said that these two tasks were highly recommended by the external inspectors in their evaluation results. Because the management did not release the details of the evaluation results, but only general results, to all staff, only people who were at the centre of power structure learned about the current performance of the institution and any aspects of performance which were far behind the demands from the MOE.

The above is general background about where the management saw the institution standing and how it reacted to the educational reforms. Those pieces of information reveal several messages. First, the educational reform at university level was likely to have a strong impact on the survival of the institution under study. Secondly, the institution is privately-funded and middle/low-ranked, so its pace towards any change and development will be cautious, slower and less ambitious than the state institutions or highly rated private institutions. Thirdly, based on the evaluation results, the institution under study has drawn up the Five-Year Development Plan (FYDP) for ten innovation tasks in the near future.

I am going to focus on two tasks of the FYDP regarding the English program to see how they were implemented and what changes were made in Chapter Five and Chapter Six. Apart from these two innovations, English teachers also engaged themselves in the change of materials. This bottom-up style of change will be presented in Chapter Seven.
Chapter Five  Case Study One

5.1. Introduction
This chapter describes an attempt to examine a teacher development program which aimed to implement a new teacher role without involving outside experts. It also describes an attempt to investigate the factors that affected the success of this top-down innovation.

There are three major parts in this case study. The first one is about the background to the innovation. Following that, the details of the innovation process will be presented. The third part is the analysis of the outcomes, in which several factors that affected innovation are identified and discussed with references to the models of change reported in the literature (Chapter One and Chapter Two).

The data and information collected were mainly from the minutes of English teachers’ meetings, informal conversations, casual questioning, school reports, school newsletters, and other documents (see Chapter Three). Apart from the role of a participant, I was also an observer.

5.2. Background to the innovation
Before I describe the background to the innovation, it has to be understood that unlike many other ELT projects in the literature that were specific for the English program, this teacher development program was not a subject-specific plan. It was an overall teacher development in different fields of education. Teacher development for English language teachers was just part of the innovation. Because the English program is the interest of this study, I would like to place my focus on the performance of English language teachers in this business-oriented school, rather than those of teachers in other subjects.

Government legislation:
In response to the evolving needs from all parties, the MOE aimed to create a second channel, in parallel with the existing channel to higher education by expanding technological-vocation education (see Chapter Four). That is, many junior colleges would be upgraded to university level if they complied with the national requirements. One of the major national requirements for system transformation was that the junior college needed to create a research culture, with a higher percentage of PhD holders and a higher level of publications. In 1994, the messages of system transformation had been diffused among junior colleges for preparation. In November 1995, the government legislated to put the law for junior college system transformation into effect.

**Institutional policy:**

The institution under study was not a prestigious school, but a middle-low rated school. Before the MOE introduced the educational reform for system transformation, it had been demanding that junior colleges should improve teachers' qualifications and raise standards. Since 1991, the school management had launched a policy as below to encourage teachers to study further in response to this demand (data source: Personal Manual of the institution 1994: 11, 19).

a) Teachers who had been in service for more than three years could apply for domestic study or overseas study on leave.

b) Teachers who undertook part-time study at domestic universities would enjoy a reduction of the teaching hours by 2 hours per week. Teachers who undertook overseas study would be assured that they could return to their teaching post after completion of their study.

Under this policy, the data show that there were currently 10 specialist-subject teachers enrolling themselves in a PhD course at domestic
universities on a part-time basis in 1994 (School Report One 1994: 11-12). However, no English language teacher was studying for a PhD degree to obtain a higher qualification. Thus, specialist-subject teachers performed better than general subject teachers. The data also showed that no teacher went for overseas study. This was because the school management did not genuinely comply with its own policy by assuring teachers' teaching posts if they did overseas study on a full-time basis. In reality, teachers had to quit their job once they decided to study overseas.

In 1994, the school management understood that the performances of all teachers, whether specialist-subject teachers or general subject teachers, still could not satisfy the national requirements (School Report One 1994: 9). A low percentage of teachers with a PhD degree and a low level of teachers' publications would be extremely unfavourable for system transformation. In August 1994, the management drew up an action plan for institutional development, the Five-Year Development Plan (FYDP), indicating ten innovation projects to be carried out (School Report Two 1996). This innovation project regarding teacher development was one of the FYDP. The new role of teacher-cum-researcher was officially introduced under this project and all teachers were required to shift from a traditional role of simple knowledge-transmitter to the new role.

5.3. Major elements of the innovation

While describing the process of the innovation, I will include the major elements of the innovation: the innovation, the innovator system, the innovating system, and the innovation process (Bolam 1976 in Pinar 1999; see 1.2.). This model provides us with a general understanding of the nature of the innovation. It will also be adopted in case studies two and three in the later chapters.
5.3.1. The innovation
This innovation intended to implement a new teacher role of teacher-cum-researcher. In addition to teaching responsibilities, the institution attempted to get teachers to obtain PhDs and write/publish articles. It was aimed at achieving these formal products of a research culture, and the successful implementation would also lead to teacher development.

5.3.2. The innovator system
The curriculum developers at the ministry level introduced the new teacher role, but they only acted as external inspectors and were not involved in the decision-making process or implementation. It was the management of the institution that was fully responsible for the innovation and its implementation. The principal and the director of the Personnel Office were the change agents. The dean of the Teaching Affairs Office was also involved to handle the matter of reducing teaching hours for the teachers on study.

5.3.3. The innovating system
The school management and all teaching staff were the adopters of the innovation imposed externally by the MOE. I was also one of the adopters.

5.3.4. The innovation process
This thesis investigates the period between the end of August 1994 and June 1996, during which the institution under study started to make preparations for system transformation. In describing the innovation process, I will organize the events which took place chronically.

In September 1994
To increase the number of teachers with research qualifications, the management hired three teachers with a PhD degree (School Report One 1994: 9). At this stage, about 82 percent of general subject teachers and
specialist-subject teachers were without PhD degrees, which still could not satisfy the MOE (ibid.).

In November 1994
Apart from the earlier policy of 1991 to encourage teachers' further study (see 5.2. above), the management started to add another two reward policies to create more favourable conditions for a research culture.

Policy 1. The teachers would be awarded incentives if they published research reports in domestic or international professional journals.

Policy 2. The teachers would be also awarded incentives if they published research reports in the institution-published journal.

In December 1994
In addition to the reward policies, the management started to diffuse information in the administration meetings about the policy of system transformation and to raise teachers' awareness of the new teacher role of teachers-cum-researchers. It was expected that the teacher representatives of each course who attended such meetings would transmit the messages to other teaching staff in teachers' meetings. In the English teachers' meeting, the teacher representative of the English course, teacher A, first introduced the policy of school improvement and the new teacher role to all English language teachers.

To act as a role model, in the meeting teacher A proposed a 'study group' (data source: the minutes of the English teachers' meeting/December '94). She suggested that all participants could investigate the problems arising from the classrooms and take turns giving a presentation in English. However, the other teachers did not seem to be supportive of this proposal because no one volunteered to give a presentation. Receiving no positive
response from other teachers, teacher A did not volunteer to offer a research plan, either. No teachers took this opportunity to define a common goal and plan an overall direction for the research group (Cunningham 1993). Finally, this study group did not materialize.

Another event took place during this period. Because the change agents had faced the demand from the external inspectors, they wanted to take a supportive attitude towards teachers’ overseas study by assuring teachers’ teaching post. At this moment, I wanted to study in an English-speaking country. I applied to the change agents to grant me one-month leave during each semester time so that I could study part-time in a foreign country. The change agents considered my study would be favourable for the system transformation of the institution, so they drew up an agreement for all teachers, in which teachers would be assured their job while doing short-term overseas study. Unfortunately, this agreement was suspended by administrator X after she heard about the new policy, which had been approved without seeking her consent. Administrator X was the director of the Finance Office, but had a close connection with the ownership of the institution. Therefore, she had the connection power (see 2.5.2.) to influence the policy. She had been opposing teachers’ overseas study on leave, and continued to do so. At this moment, it was a dilemma for me to make a choice between study and job. Finally, I decided to stay at the school.

In June 1995
Because overseas study would result in loss of one’s job, some other English teachers planned to attend entrance examinations for domestic research courses. Teacher U, one of the English language teachers, passed the entrance examination and successfully enrolled herself in a PhD course in English/American literature.
In November 1995
In the English teachers’ meeting, several teachers complained about the poor library stock of books and journals on ELT. They expressed their need for research resources, such as professional journals, e.g. *English for Specific Purpose*, and electronic databases, e.g. *ERIC database*. The dean of the Teaching Affairs Office had once responded to this request in writing to show his understanding of the problem (data source: the minutes of the English teachers’ meeting/November’95), but finally no action was taken (also see April ‘96 below).

In December 1995
Newsletters were also used to spread the new policies to all staff. Shortly after the government had legislated and put the law of system transformation into effect, the management demonstrated a stronger determination towards system transformation. The management announced another new reward policy regarding group research in the school newsletter (data source: school newsletter/December’95). The policy stated that teachers who would like to undertake group research would be financially assisted from the academic year 1996 on. This policy differed from the previous ones in that it encouraged collaborative research, rather than individual research.

Up to now, the management tried to diffuse the innovation by formalizing the policies and publicizing them in the newsletters. Based on the written policies and formalized procedure, the management tried to make sure that all staff were informed of the resources available for their research.

In February 1996
Although the Five-Year Development Plan (FYDP) had been drawn up in 1994, it was only now that the principal verbally introduced the FYDP project to all the staff in an extraordinary staff meeting (see 4.4.3.3. in Chapter Four). In this meeting, every staff member was given a copy of
School Report Two, enclosing a list of future projects concerning system transformation. This was the first time that the principal described the changing educational environments and stressed the need for system transformation to all staff (School Report Two: 1996). It was also the first time that the principal verbally introduced the new teacher role – teacher-cum-teacher. The principal’s full speech was also publicized in the school newsletter of March, 96.

Following the meeting, in the same month the principal stressed again the importance of creating a research culture in a tutor meeting. He stated that the institution had to cope successfully with this educational innovation in order to survive in the future. Each staff member should hold the attitude that if the institution survived in the change, then s/he survived, too (see Excerpt 4-04 in 4.5.1. in Chapter Four). The institution had to be upgraded to university level so that it would not lose its competitiveness (data source: the minutes of the tutor meeting/Feb’96). Again, the principal tried to diffuse the innovation through an open speech.

**In March 1996**

The management set up a sanction policy that assistant teachers who had a bachelor degree had to pass entrance examinations and enrol themselves in a master’s course before August 1997, otherwise they would no longer be given teaching responsibilities (data source: school newsletter/March ’96 : 8). The use of this sanction tried to build a sense of urgency to mobilize teachers.

**In April 1996**

During this period, with financial assistance from the MOE, the library reported the available stock of research resources. Currently, the library stocked books in all languages up to 50,000 volumes, and journals up to 467 series (data source: school newsletter/April'96). However, the total number
of volumes was still lower than required by the MOE. Besides, because the institution was business-oriented, most books and journals were on business subjects, rather than language teaching and education. Therefore, the total books and journals on English language teaching were still poorly supplied (data source: a list of books and journal on ELT, see Appendix 5-1). No improvement had been made in response to English language teachers' request for more research resources (see November'95 above).

In June 1996
Now it came to the end of the academic year. Till June 1996, under the reward policies, 26 group research projects had been proposed and they had received financial assistance from the institution. However, among them, 24 projects were proposed by specialist-subject teachers and two research projects were proposed by general subject teachers: one was on the problem of trade unionism and the other on the problems of smoking. English language teachers had not undertaken any group research projects or propose any individual research plan so far. Regarding further study, among general subject teachers, three teachers of Chinese had passed the entrance exams and enrolled in PhD courses. Two English language teachers had attended the PhD entrance exams, but only one passed such exams successfully. In general, during the period between 1994 and 1996, specialist-subject teachers continued having a more productive performance than general subject teachers. However, the total number of research reports published by all teachers at this institution was lower than those at other prestigious institutions and still could not satisfy the national requirements for the approval of system transformation in summer 1996. The outcomes showed that most English teachers still remained immobilized in acquiring a research qualification or publishing research reports. Most English language teachers still had unproductive performance as before. The teacher development project in a research model seemed to fail to mobilize English language teachers in active participation after it had been in practice for
nearly two academic years.

5.4. Analysing the outcomes
5.4.1. Model of innovation:

This innovation process contained the typical feature of the centre-periphery model described by Markee (1997; see 2.2.1). In particular, it was doubly centre-periphery in that the management was in a peripheral position relative to the Ministry and the teachers were peripheral to the management (see Figure 5.1. below). The 'centre', i.e. the ministry, introduced a new value of teacher-cum-researcher into its 'periphery', i.e. the institution. After the policy was passed down to the school management, it turned out to be the centre and the teachers were on the periphery of this decision-making process.

The rise of the double centre-periphery model seems to be related to the impact of marketisation on schools, as discussed in 2.2.1. The idea of the double centre-periphery model is that if the institution does not want to lose its potential students to its competitors, it has to take responsibility for capacity-building, decision-making, and problem-solving on its own. Taiwan is a technology-business country. Market forces were also evidenced in the educational reforms (see 4.3.) which freed up the supply side of the education market to meet the demand side of the market (see reform c. in 4.3.) and introduced the local management of schools, such as offering universities more academic and administrative independence (see Reform a. in 4.3.) and devolving budgets from the central ministry of education to schools (see Reform b. in 4.3). The central ministry of education at the first layer regarded schools at the junior college level or above as autonomous. It no longer took responsibility to direct less competent institutions or coach them for the innovation. The local school management was required to take responsibility for the innovation imposed top-down, in terms of capacity-building, decision-making, problem-solving,
and resource-seeking. At the second layer, the school management turned out to be the centre to prescribe a solution and teachers and students were still perceived as passive receivers.

In the following sections, I will first briefly describe the first layer of the double centre-periphery, then I will go on to the analysis of the second layer of the double centre-periphery innovation model and its process.

5.4.1.1. The first layer of the double centre-periphery model

5.4.1.1.1. Leadership style

The double centre-periphery model tends to produce a delegating leadership style at the centre of the first layer. As mentioned earlier, the curriculum developers at the ministry level introduced the innovation and placed the full responsibilities on the part of the school management. Every two or four years, they visited the institution and acted as external inspectors to evaluate the performance of the institution (see 4.3.3. in Chapter Four). They were not involved in the innovation process at all. They just set up certain criteria for the school management to comply with, but they did not clearly tell them how to do, when to do, or closely supervise their performance (see 2.3). Neither did they provide support or facilitate the school management in problem-solving and decision-making. Their leadership style corresponded to the delegating style of leadership that is characterized by low supportive behaviour and low directive behaviour (2.3.). However, the private-enterprise institution under study is middle/low rated and located in a small rural town (4.4.). It also received less supporting resources than state institutions. These unfavourable environments made it less competitive in the reforms. Low supportive behaviour and low directive behaviour from the MOE throughout the process resulted in the problem of institutional change capacity, as will be discussed later.
5.4.1.1.2. Change strategies

The double centre-periphery innovation model revealed that the curriculum developers at the ministry level tended to adopt a power-coercive strategy to manage change by using rewards and sanctions to push the institution to commit to change (2.2.1.). If the institution had satisfactory performance, then it would receive more financial assistance and be upgraded to the university level. The use of rewards and sanctions may be effective in pushing people to act differently, but it is ineffective in helping less competent institutions to cope with change, as seen in the outcomes.

5.4.1.2. The second layer of the double centre-periphery model

5.4.1.2.1. The power culture

In the role culture of an organization, people are role occupants and they derive the right to exercise authority based on the hierarchical positions they occupy (see 2.1 and 2.2.). However, the organizational culture under study is not considered as a role culture, but as a power culture, because the change agents' decisions and policies had to be approved by the central power figures, such as administrator X. These central power figures represented the power centre due to their close connection with the ownership of the institution, i.e. connection power (2.5.2.). Therefore, the organization culture appeared to be a power culture in which all direction and control radiated from the power centre and the change agents were not fully empowered. It was the power centre that owned the ultimate control over all policies, including budget planning, budget spending, and personnel policies, etc.

Two incidents illustrated the power culture of the institution and the ineffectiveness of the change agents due to their inadequate empowerment. The first incident was concerning the withdrawal of the policy in favour of teachers' overseas study. The principal would like to make efforts to respond to teachers' constraints on overseas study by assuring their job (5.3.4.}
December'94), but one of the central figures (administrator X) did not support it and accordingly withdrew it.

The second incident was concerning the improvement of library stock of ELT for English language teachers. According to our data, the dean of the Teaching Affairs Office had once responded to English teachers' request for better research resources, but finally no action had been taken. This was partly because the institution under study was business-oriented, so the library had the first priority to spend the budget on the books and journals on business and management, rather than on ELT. As one of the librarians revealed the way the library subscribed to books and journals (see Excerpt 5.1 below):

**Excerpt 5.1**

(Casual questioning)
Librarian A: our budget is limited, so we have to spend it carefully. However, because the institution is business-oriented, our first priority will subscribe to the professional books and journals on business and management, rather than on language teaching or education.

Therefore, because an increase of library stock in ELT meant an increase of annual budget, the change agents did not win full support from the authorities to decide on budget planning and budget spending and therefore could not provide adequate resources to meet English teachers' felt needs.

5.4.1.2.2. Leadership style

A great deal of competitive pressure on schools, derived from the value of marketisation, was addressed in the speech by the principal (see Feb’96 in 5.3.4. above; also see Excerpt 4-04 in 4.5.1. in Chapter Four). The principal encouraged the teaching staff to commit themselves in research because the institution had to cope successfully with the educational innovation in order
to remain competitive and survive in the future

On the other hand, as a result of the power culture, the principal and the other change agent (the director of the Personnel Office) did not perform a high level of supportive behaviour to create conditions favourable for English language teachers. They did not closely supervise their performance, listen to their problems, or facilitate them in problem-solving. They did not seem to perform a high level of directive behaviour, either. Although the data showed that change agents encouraged teachers to do research, they did not direct teachers to do research, e.g. giving them a prescribed thematic topic, and clearly tell them how to do it and where to do it. Like the curriculum developers at the ministry level, the change agents at the institutional level also adopted a delegating leadership style (2.3.) throughout the process. However, in 2.3., we have indicated that low supportive behaviour and low directive behaviour are unable to help adopters who were less competent and less confident. Wallace (1998: 56) has indicated that to do research properly requires special expertise, a lot of time and financial resources, etc., so it is important to provide training to coach beginner researchers and support them wherever necessary before they have developed confidence and competency in research. However, lack of a high level of supportive behaviour from the change agents was not only a consequence of the power culture, but also resulted from the underdevelopment of the institutional change capacity, as will be discussed in the later section.

5.4.1.2.3. Change strategies:
The innovation process described in 5.3.4. above showed that the change agents of the institution adopted a power-coercive strategy to manage change. They rewarded the teachers for satisfactory performance with promotions and incentives. On the other hand, the sanction policy indeed gave a warning of job loss to those teachers who remained immobilized (see 5.3.4 March’96). The use of rewards and sanctions did push English language
teachers to act differently. The proposal of ‘study group’ and the participation in entrance examinations leading to the higher education by English language teachers are examples to illustrate the instant effectiveness of the use of rewards and sanctions.

Although people’s adoption behaviour tends to follow the model of the expectancy theory (Vroom 1964; see 2.2.1.) which argues that people will involve themselves in change if they expect it to be worth while and to lead to personal benefits, such as financial benefits, job security, and promotion opportunities, the outcomes showed that the use of rewards and sanctions did not appear to be very effective in mobilizing English language teachers. It was found that some factors inherent in the innovation actually made it difficult for English language teachers to believe the personal benefits would outweigh the costs from the new teacher role. In 2.4. we have shown that innovations have a range of attributes that potentially either promote or inhibit the adoption (see 2.4.). In the following, the analysis of those attributes will allow us to understand the factors that also potentially affected the adoption behaviour by English language teachers.
Figure 5.1. Double centre-periphery model
(adapted from the 'approaches to change' by Markee 1997 : 62)

(1) First layer of centre-periphery model

Centre
(The MOE)
\[\text{power-coercive strategies}\]
Periphery
(The school management : adopter 1.)

(2) Second layer of centre-periphery model

Centre
(The school management)
\[\text{power-coercive strategies}\]
Periphery
(The teachers : adopter 2.)
5.4.2. The attributes of innovation

1. Relative advantage
The more relative advantages of a change the adopters perceive, the higher chance they will accept the change (Rogers 1983; 2.4.). Although the change agents tried to increase the level of advantages of doing research, such as promoting teachers or providing incentives and financial assistance, the rewards were available only for those teachers who were already confident and competent in getting research started. By comparison, it was more difficult for those who had neither research experience nor research capability to enjoy such financial assistance. Therefore, instead of gaining advantages from the innovation, teachers perceived several disadvantages of the new teacher role.

First, the role of teachers-cum-researchers would demand additional work and time from teachers. However, teachers had been accustomed to their daily routines at work and at home for years. In addition to teaching responsibility, they would have to set aside a great deal of time to do research, which meant that their established life style would be largely affected. As a result, lack of time became the impeding factor. As one teacher complained (Excerpt 5.2 below):

Excerpt 5.2.

(Informal conversation)
Teacher N: We have to take charge of counselling, teaching, and research. In our staff meeting last time, the principal emphasized the importance of doing research. I doubt whether we have enough time to do research.

Secondly, from the point of view of English language teachers, another principal disadvantage inherent in the innovation was job loss. Most English language teachers expressed their wish to take higher education in English-speaking countries. However, the management did not genuinely
comply with its institutional policy by assuring teachers' job (see 5.3.4 December'94). This meant that teachers were immediately faced with loss of their job if they did overseas study. They would be also faced with financial loss, due to lack of income. Fear of losing a job and losing financial resources made them immobilized. Besides, fear of failure in a PhD course discouraged them, too. Three teachers expressed their anxieties and their fear as below (Excerpt 5.3. below):

Excerpt 5.3.

(Informal conversation)

Teacher O: I prefer to study in the USA. But it is not easy to do a PhD degree, compared to a master’s course. Besides, I have a family to look after, too.

Teacher P: Me, too. I prefer to study in the USA. But it also needs a lot of courage and determination to do a PhD degree in a foreign country. A Ph.D. course will sometimes take more than three years, or even more. It also needs a great amount of money. In the end, I will not be guaranteed to succeed in the course.

Teacher R: I am not interested in Ph.D. entrance exams because I am fed up with those theoretical readings. I prefer to apply for a Ph.D. course in the USA to avoid such exams. But a Ph.D. course is much harder than a master’s course, in terms of energy, time, and expense, etc. Above all, it is still uncertain that I will get what I invest.

These anxieties about financial loss and fear of failure became psychological barriers (Dalin 1987 and Dalin et al 1993) and made it difficult for teachers to believe that the potential benefits of the innovation would outweigh its costs.
2. Complexity
When the innovation proposed requires very complex expertise and skills that are beyond adopters' current skills and competence, adopters are more likely to resist it. However, the research process is relatively complex. Bell (1993) indicates that there are some problems facing a beginner researcher when s/he wants to produce a small project. S/he needs to select a topic, identify the objectives of study, plan and design a suitable methodology, devise research instruments, negotiate access to institutions, materials and people, collect, analyse and present information and finally produce a well-written report. To do a large-scale research project will require sophisticated techniques and, often, statistical and computational expertise. Therefore, before teachers had developed their confidence and competence in research skills, a high level of complexity inherent in research would be viewed as a major hindrance to its adoption by teachers.

3. Compatibility
The new role of teachers-cum-researchers was culturally different from the three traditional responsibilities of the Confucian teacher role: preaching the truth to students, transmitting knowledge to students, and clarifying students' confusions. Teachers had been teaching subject matter and been responsible for moral teaching in the past, but they did not have any experience in conducting teacher research. The new teacher role was fundamentally inconsistent with already existing philosophy and belief. When innovations are too different from adopters' current practices and value, they are unlikely to be adopted (Roger 1983; Markee 1997: 90; see 2.4.). Such a value barrier was an example to illustrate how the cultural factor affects the acceptance of an innovation (1.3.1.).

4. Observability
The more visible an innovation is, the more likely it is that people who observe it will adopt it (Rodger 1983; 2.4.). However, English language
teachers were not exposed to any teacher research process conducted by their peers and predecessors who also worked in the English program. Besides, some teachers had completed their study without being required to write a dissertation, so they did not have any experience in producing a written account of the research. Therefore, the results were not observable to teachers.

5. Trialability
Innovations that can be tried out in incremental stages tend to be much more acceptable to potential adopters. Because the research process is so complex (see above), teachers need to be given time to learn how to do research. We all learn how to do research by actually doing it, so one of the best ways to encourage teachers to experiment a research project is to provide them with an easy access to research training courses. However, because the research training programs were almost non-existent (also see 5.4.3.2.1. below), teachers encountered difficulties in trying out a research project to learn how to do research. A low level of trialability was viewed as a major hindrance to the adoption, too.

So far, through the analysis of the attributes, it was found that there was a high level of complexity, but a low level of relative advantages, compatibility, observability and trialability inherent in the new role of teacher-cum-researcher. The constraints on teacher research have been studied by McKernan (1993) and Burns (1999). Their reports list several constraints, such as lack of time, lack of resources, lack of research skills, and additional work, etc. These constraints correspond to the results of the attributes of the innovation in this case study. All this meant that this innovation would surely encounter a great deal of resistance from its adopters if such constraints could not be resolved. That is why Vroom's expectancy theory (1964; see 2.2.1.) is not so applicable to the adoption behaviour by teachers in this case study. Therefore, as discussed in Chapter One, the
best way to reduce resistance is to increase the level of attributes that are positively associated with the adoption behaviour, but decrease the attributes that are negatively associated with the adoption behaviour. Certain arrangements need to be organized by the change agents to facilitate acceptance and implementation of the innovation. Regarding this, I would like to examine whether this project under study conformed to a two-in-one innovation model and recast the same observation into a new framework. In Chapter One (1.4.3.), we have indicated that change agents have to implement not only primary innovations, i.e. the introduction of a new role of teachers, but also secondary innovations, i.e. the organizational development. Markee (1997) indicates that the function of the secondary innovations is to enable the primary innovations.

5.4.3. Two-in-one innovations
5.4.3.1. Primary innovations
The introduction of the new role of teacher-cum-researcher requires new skills and new value systems. As mentioned earlier, it requires teachers to adapt themselves to the new role. So far, the evidence has shown that there was a minimal degree of the implementation of the primary innovations. English language teachers did not develop research skills and adapt themselves to the new role. The non-implementation of the primary innovations by English language teachers was indeed caused by the failure of secondary innovations by the change agents who failed to make necessary arrangements oriented to the attributes of innovation to facilitate adoption and implementation. Two main mechanisms under the secondary innovations will be discussed.

5.4.3.2. Secondary innovations
5.4.3.2.1. Research training and research resources
There were two main channels of research resource from which language teachers could get support to facilitate implementation. One was provided
by the institution and the other by the MOE.

(1) The institutional environments
The resource provided by the institution was the most direct and convenient channel for teachers. However, because this institution was business-oriented, the data show that the management tended to dedicate their change efforts into the five specialized departments to improve their equipment and facilities for specialist-subject courses. Because the English program was only part of the general courses that did not belong to any specific department, it received less attention from the management and consequently received fewer resources than specialist-subject courses. As mentioned earlier (5.4.1.2.1.), the budget of the library was mostly spent on the professional books and journals on business and management. The library stock of ELT materials was extremely limited. In addition, crowded surroundings and poor facilities were not favourable for research, either. About four specialist-subject teachers shared one office with computers provided, but there were 10 English language teachers sharing one office, which was too crowded for individual study. Teachers cannot do without tools. English language teachers were asked to write papers, but not provided with computers that were necessary for word processing or doing statistics in quantitative research, etc. When asked about the possibility of conducting research, two teachers expressed the constraints as below:
Excerpt 5.3.

(Casual questioning)
Teacher O: Our library does not have any professional journals and books on ELT, such as TESOL andERIC, etc. Our resource is extremely limited so that it is not easy for us to read research papers and keep up with the latest knowledge.

Teacher P: There are 10 teachers sharing the office, but we are not provided with a computer in our office. There are so many informed resources on the internet web sites. The authorities asked us to do research, but they did not take action to help us.

Those extremely limited research resources made it more difficult for English language teachers to experiment with research, which reflected the practical barriers (see 2.5.3.) to teacher research. These practical barriers were indeed closely related to the structure of the institution. In other words, because the institution under study was business-oriented, the academic support for teachers of English was largely neglected, compared to teachers of business-related courses. This is an example of how the organizational feature affected the allocation of research resources and the implementation of the innovation.

Although there were extremely inadequate research resources, forming a research group by English language teachers would have been another way to learn how to conduct research. In this study, teacher A was identified as an early adopter (see 1.2.2.) and she wanted to act as a role model to mobilize teachers. She proposed a ‘study group’ in which all teachers were invited to conduct action research by investigating the problems arising from classrooms (December’94 in 5.3.4. above). In Chapter One (see 1.4.1.3.), we have mentioned the importance of identifying the early adopters so that their adoption behaviour can influence others. We have also in Chapter One
mentioned that among various research approaches to education, the action research approach allows beginner researchers to conduct small-scale research closely related to his/her own professional performance (Bell 1993: 7). Therefore, the action research group proposed by the early adopter could have been expected to provide a good opportunity for teachers to obtain research experience by actually doing it. However, there were two factors that finally prevented the 'study group' from materializing and bringing about results as expected.

First, the early adopter failed to realize the groundwork for a role model in forming an action research group. Normally, teachers are led by other experienced teachers. However, because the early adopter was not experienced, she could not take a series of actions to get things started successfully and failed to act as an effective role model. If we refer to several general steps for getting started in action research suggested by Kemmis and McTaggart (see Table 5.1. below), we will find that several tasks need to be done when one tries to form an action research group. Apart from providing easy access for all teachers, the early adopter also needed to get organized by negotiating meeting times and to articulate a thematic concern that interested everyone, etc. For instance, to encourage other teachers to articulate the classroom problems so that they could select a research issue to examine, teacher A could have offered simple suggestions to get people started. Then, because one-off meetings cannot sort out all the details, such as the goal and the overall plan of a research study, the follow-up meetings are extremely needed. Teacher A should have negotiated meeting times for research. Unfortunately, the early adopter in this case study failed to make the efforts suggested, so the likely opportunity was wasted.
Table 5.1. Steps for getting started in action research
(Kemmis and McTaggart 1988: 25-26 in Burns 1999: 51)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>get an action research group together and participate yourself.</td>
</tr>
<tr>
<td>2.</td>
<td>Allow easy access for others. Invite others to come when topics that interest them will be discussed;</td>
</tr>
<tr>
<td>3.</td>
<td>get organized, get things started by arranging an initial launching, identifying a nucleus of enthusiasts, negotiating meeting times, and the like;</td>
</tr>
<tr>
<td>4.</td>
<td>start small -- perhaps offer simple suggestions to get people started. Work on articulating the thematic concern which will hold your group together and establish agreement in the group that the thematic concern is a shared basis for collaborative action;</td>
</tr>
<tr>
<td>5.</td>
<td>establish a time-line -- set a realistic trial period which allows people to collect data, reflect and report over two or three simple cycles of planning, acting, observing, and reflecting.</td>
</tr>
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</table>

Secondly, there was no training program available to give teachers a clear idea of what action research is, what it is for, and train them in how action research can be done, which was the other reason that prevented teachers from active participation in this action research group. Research involves a complex process. Although English language teachers could have started with research by adopting the action research approach, they needed to be trained in basic skills. In Ho and Crookall’s study (1995; see 1.4.1.3.), they indicated that teachers without training did not know how to get the action research started. They emphasized that it is necessary to incorporate research training into English teacher preparation education and other kinds of in-service English teacher training programs so that teachers of English can learn how to diagnose classroom problems and generate solutions feasible to their specific situations in a research-based model. Besides, the action research process consists of a number of phases which often recur in cycles: planning, action, observation, and reflection (Richards and Lockhart 1996: 12). The process of reflection on professional action is considered by
Wallace (1991; 1998) to be very important for teacher development. However, not all teachers are naturally reflective (Roberts 1999). Teachers tend to express their satisfaction (or unease) in terms of feeling, rather than a conscious application of principles (Wallace 1991; 1998). Therefore, it cannot be expected that English language teachers were able to engage themselves in the phase of reflection without training and get their research started. Lack of reflection capacity seemed to be the reason why English language teachers were unproductive in research. The problem of the reflection capability will also be presented later in case study three, Chapter Seven. The non-implementation not only illustrates teachers’ incomplete understanding of and inadequate competency in research skills, but also highlights the importance of teacher training, which had been largely neglected by the school management.

(2) The wider educational environments
When we look at the wider educational environments, it is found that the MOE did not create favourable conditions for teachers to obtain adequate research support, either. The MOE wanted teachers to develop their research capability from PhD courses, but without first resolving the unequal allocation of research resources in different fields of education. It did not create easy access to research training programs for English language teachers and incorporate it into the innovation program. Taiwan is a technology-business oriented country, as mentioned earlier in 5.4.1. Due to the economic priority of the society, many universities in Taiwan had PhD courses and research training in industry and business in response to its economic structure. English language courses are mainly intended to train learners in the command of the target language or to provide them with culture study in American/English literature at a master’s degree level. Only four literature-oriented courses were available at a PhD level in 1995. No PhD course in English language teaching was established by 1995. As a result of the wider national educational system, English language teachers
who were not interested in literature had no choice but to travel to English-speaking countries for further study. Even if English language teachers would like to enrol in a literature course, there was stiff competition in PhD entrance examinations, due to a limited number of places available in those courses. Compared to science teachers or business teachers, English language teachers encountered more difficulties in getting access to PhD courses. This was an example to illustrate that the economic structure of a society will largely affect its educational structure and result in the unequal allocation of research resources, and show that innovation is always constrained by its multiple sociocultural constraints (1.3.1.).

5.4.3.2.2. Communication mechanisms
In 2.5.4., we emphasised that effective communication is the most important factor for the successful implementation of both primary and secondary innovations. To effect an innovation, the change agents have to devise a better communication network. In this study, the change agents did not establish a new communication mechanism network, but adopted two existing channels of communication to communicate the message with the teachers: a top-down communication channel and a bottom-up communication channel.

1. Top-down communication channel
In this top-down communication channel, the idea of teachers-cum-researchers and the details of reward/sanction policies were transmitted through the teacher representatives of each subject, the principal’s speeches, and school newsletters. The data showed that the principal had given speeches twice in an extraordinary staff meeting and a tutor meeting (see 4.4.3.3.) to diffuse the innovation to more than 200 teaching members (see Feb'96 in 5.3.4). All this was intended to advocate the policy of system transformation and the demand for the role of teacher-cum-researcher. However, such a channel was limited to one-sided
transmission from the top to its bottom because the change agents were the givers of information and teachers were the receivers.

2. Bottom-up communication channel
A bottom-up communication channel is considered to help the management understand what teachers think and their perceived constraints on the innovations. There had been a bottom-up communication channel through the minutes of the teachers' meetings. Every academic year, English language teachers were required by the Teaching Affairs Office to hold meetings at least twice every academic semester (see 4.4.3.3.), and then the minutes of the English teachers' meetings were recorded in writing and passed on to the principal and the dean of the Teaching Affairs Office. English language teachers in this case study also took this channel to express their perceived constraints and ask for professional journals and books on ELT (data source: the minute of the English teachers' meeting/November'95). However, this channel was also limited to one-sided transmission of message.

When we examine the two existing communication channels, they appear to be two one-sided communication channels where no direct communication would take place between two parties. This proved to be ineffective in facilitating the understanding of two parties involved and was a hindrance to the success of the innovation. Most of the messages of the innovation were transmitted top-down through a so-called third party, i.e. either teacher representatives of each subject or school newsletters. Ideally, it would have been more effective for teachers to talk to the people in power. However, the power centre did not establish any direct communication channel between it and teachers, so it did not openly communicate with English language teachers about how to improve their research conditions. There was no clue to understand whether the power centre had understood teachers' constraints and to what extent it seriously intended to facilitate them in
problem-solving. This was an example of how teachers were left helpless to work on the innovation on their own, due to the communication barrier. Karavas-Doukas (1995) in her study has indicated that one of the reasons why Greek teachers failed to implement the EFL innovation in secondary schools was that the project planners neglected the importance of communication and failed to provide teachers with adequate support. Therefore, it is extremely important for the project planners to establish a direct communication channel to ensure that they have understood the adopters’ perceived barriers to change and discuss the likely solutions with them. Because problems will not go away simply by postponing them or avoiding them, this case study illustrates that effective communication cannot be achieved without a two-sided, direct communication channel where two parties involved listen to each other, talk about their problems, discuss them together, and collaboratively seek ways to resolve them.

The analysis so far has shown that the change agents failed to achieve the academic and administrative development for organisational development as a result of the absence of a research training mechanism and an effective communication mechanism. However, failure to implement innovation in a two-in-one innovation model was indeed caused by no attempt being made to develop the institutional capacity to innovate.

5.4.4. The institutional change capacity

The curriculum developers at the ministry level did not consider the capacity differences between the prestigious schools and middle-low rated schools. Like the school management, they also did not perform a high level of supportive behaviour to coach and support this institution that was less competent. Due to the economic structure change, the impact of marketisation on schools made them adopt the delegating leadership style, without assuming responsibility for the implementation (see 5.4.1. and 5.4.1.1.1). They did not attempt to provide adequate outside expertise to
develop the institutional capacity to innovate. The MOE did not provide adequate outside expertise and resources to develop the school capacity to cope with change. This problem is identified as one of the major factors for the failure in many projects (see Table 1.3. in Chapter One). Consequently, the underdevelopment of the institutional change capacity contributed to the minimal degree of the implementation. This also means that only the strong survive - innovating institutions will survive, but non-innovating ones will close.

5.5. Summary
Setbacks in implementation
This teacher development program imposed externally from above attempted to introduce a new role of teachers-cum-researchers to improve the institution and raise its standards. It was intended to get teachers to obtain PhDs and write/publish papers. As a result of marketisation on education, the MOE adopted the double centre-periphery model coupled with a power-coercive strategy to manage change. However, the danger of using the tactics of force is that change would be seen as a threat or loss when it is imposed on employees, regardless of whether they like it or not (Morrison 1998; see 2.2.1.)

The outcomes showed that English language teachers finally did not have productive performance for several reasons. At the institutional level, the use of rewards and sanctions by the change agents could not mobilize English language teachers effectively because they did not perceive that the personal benefits would outweigh the costs. As a result of the power culture, the change agents were not fully empowered and they could not act as effective leaders by performing a high level of supportive behaviour to coach and support English language teachers. They also failed to make necessary arrangements to increase the attributes that are positively associated with the adoption and decrease the attributes that are negatively
associated with the adoption. Therefore, a variety of barriers, i.e. value barriers, psychological barriers, practical barriers, and communication barriers, could not be resolved effectively. Consequently, English language teachers did not adapt themselves to the new role and develop their skills. However, the failure of the primary innovation by teachers indeed resulted from the failure by the change agents to implement the secondary innovations, the function of which is to enable the primary innovations. Due to lack of a teacher training mechanism and a direct communication mechanism, the change agents failed to implement what Markee (1997) calls 'two-in-one innovations'. All those impeding factors for the implementation reflected the underdevelopment of the institutional capacity to cope with change.

At the ministry level, the MOE did not develop the school capacity to cope with change. Like the school management, the MOE did not perform a high level of supportive behaviour to coach and support this institution that was less competent by providing outside expertise in the innovation and its management. The curriculum developers at the ministry level did not consider the capacity differences between the prestigious schools and middle-low rated schools. This case study also illustrates that innovation is always constrained by its multiple sociocultural constraints. The economic structure of a society would largely affect its educational structure and result in the unequal allocation of research resources. Because Taiwan is a business/technology- oriented country, more resources fell into the business/technology area, English language teachers encountered extremely limited resources in research. Because the institution was business-oriented, the English program was largely neglected. English language teachers received fewer resources and less attention from the school management. Due to the unfavourable conditions in both the wider educational environments and the institutional environments, English language teachers were not given easy access to research training and unable to experiment
with research to develop their research skills, which was the major hindrance to the implementation. This was an example to illustrate that the economic, administrative, and institutional factors all affected the likely success of this innovation (1.3.1.).
Chapter Six    Case Study Two

6.1. Introduction
Unlike case study one imposed entirely top-down, this chapter describes an attempt to examine an innovation initiated from both directions, with the intention of integrating computers into the English program. It also investigates the factors that affected the success of the innovation.

As in the previous case study, there are three major parts in this case study: the background to the innovation, the innovation process, and the analysis of the outcomes. Some models of change that have appeared in the previous case study will be adopted once more.

The data and information collected were mainly from the minutes of English teachers' meetings, informal conversations, casual questioning, school reports, school newsletters, and other documents. As in the previous case study, apart from the role of a participant, I was also an observer.

6.2. Background to the innovation
There was no language lab specific for language learning/teaching in the institution. When the external inspectors from the MOE paid a regular visit to the institution to evaluate the overall development, they were unhappy that there was no language lab in the English program. To obtain favourable evaluation results, the school management decided to establish such a lab to comply with the external evaluators' decisions and therefore this project became part of the Five-Year Development Plan (FYDP), as in the previous case study.

Currently teachers had to play tapes which came with the current textbooks in ordinary classrooms by means of cassette players. In fact, in the past years the English teachers had urged the institution to establish an
audio/video language lab where the facilities of cassette/video players would be provided (The minutes of the English teachers' meeting/Nov'95). However, no response had been given by the school management at that time. Therefore, although this innovation was to respond to the demand by the MOE, it was also expected by teachers to serve their felt needs. This innovation was indeed initiated from both directions.

6.3. Major elements of the innovation
As in the previous case study, I would like to first describe the major characteristics: the innovation, the innovating system, the innovator system, and the innovation process.

6.3.1. The innovation
This innovation was to improve facilities and equipment in the English program by establishing a language lab. It was thought that the introduction of computers would satisfy the external inspectors' requirement and also bring better practice.

6.3.2. The innovator system:
Although the external inspectors initiated this innovation, they were not involved in the innovation process. The management had to implement it on its own and the actual change agents were administrators X and Y. In case study one, we have discussed the role of administrator X and understood that she represented the power centre of the institution. Administrator Y was her brother. Both of them were empowered to act as change agents due to their connection power (see 5.4.1.2.1.).

Indeed, unlike the previous study, there was a lack of clarity in the beginning as to who was in charge of the innovation at institutional level, because they did not turn up and communicate any message with the English teachers face-to-face (see 6.4.5.2.2. below). The statement of the FYDP read that
the dean and the other leading administrators of the Teaching Affairs Office would be responsible for this innovation (data source: School Report Two: 1996). However, when investigating the process, I found that they did not play a role at all. To find out who acted as the change agents, I tried to elicit information from the people who had something to do with the administration (see Excerpt 6.1. below). Because I was on good terms with administrator D who had been involved in the matter of audio/visual facilities before and had a functional status in the matter of computer/language lab, there was good access for me to look for answers from her. She was presumed to be the right person to offer reliable information. The excerpt of March 2'96 by administrator D revealed that it was administrator Y who decided to introduce the trendiest stuff - computers and changed the project from an audio/video lab to a computer/language lab (see Excerpt 6.1. below). If I had not been able to refer to the people who were involved in the matter, I would not have been able to obtain information as to who were the actual change agents.

Excerpt 6.1.

(Casual questioning)
(I made a visit to the library to talk to administrator D about the impracticability of computers and the software program.)

Administrator D: Besides administrator X, it was administrator Y who planned for the whole matter. He had just come back from the USA. He had seen some language labs with computers in the USA. So he thought it was a trend to use computers for language learning and other teaching purposes. In his view, a language lab with computers was far more useful than an ordinary language lab without computers. They decided what facilities were going to be purchased, etc.
6.3.3. The innovating system
The school management adopted the decision from the external inspectors from the MOE. English language teachers and students were the receivers as well as the users of the innovation. Neither teachers’ nor learners’ needs were consulted or incorporated into the decision-making. However, teachers’ non-participation later became a potential problem for adoption and implementation.

6.3.4. The innovation process
In August 1995
In the first week of the academic year, the change agents first informed English teachers of this innovation project through a third party, the teacher representative of the English program - teacher A. After having attended the administration meeting on behalf of all English language teachers (see 4.4.3.3.), teacher A returned to inform English language teachers about the project of a language/computer lab. Her message was about where the lab would be located and when it would be completed. No further details were given to English language teachers, in terms of the objectives of the innovation, the type of software, and models of audio/video equipment, etc. (The minutes of the English teachers’ meeting/August’95).

In November 1995
After two months, the lab was completed. Teachers were not involved in the process at all. Then they were told to attend the orientations held by the management. These orientations consist of demonstrations of the hardware and software in the computer/language lab. The first orientation was attended by all members of teaching staff at the institution, regardless of subjects, and the speaker was a computer technician from the computer shop. The topic was mainly the knowledge of MS-DOS. Because all teaching staff, i.e. specialist-subject teachers and general subject teachers, were the target participants, the first orientation did not cover the specific topic for
language teaching/learning. A week later, the second orientation was held. The target audience was only English teachers. The speaker was again a computer technician from the computer shop. The second orientation provided the instruction for the use of computers and the steps for operating the software, but teachers did not receive any relevant training in CALL. After the one-off orientations, teachers still did not have an idea about how to operate the hardware and software.

It was only at this point that English language teachers, including me, started to realize that the innovation project was mainly about the introduction of computers into classrooms. No tape/video players were provided in this lab, so teachers could not play the tapes that accompanied the current textbooks. This meant that what teachers were given was not what they expected.

**In November 1995**

In the English teachers' Meeting, several English teachers took this opportunity to complain about the impracticality of the language/computer lab. First, they emphasized that they needed audio/video facilities more badly than computers (The minutes of the English teachers' meeting/November'95 in Excerpt 6.3 in 6.4.2. below). Secondly, teachers addressed the problem of the software installed in the computer/language lab. The software program the teachers wanted was to provide two-sided broadcasting between students and teachers so that they could hear speaking from students and then correct their pronunciation or make other interactive conversations. However, the current software program only provided one-sided broadcasting from teachers to students, not vice versa, which did not serve the teachers' need.

**In December 1995**

In the administration meeting, teacher A took this opportunity to pass on
teachers' complaints and opinions to the school management (data source: school newsletter/December'95). In reply to this problem, one of the change agents (Administrator X) replied that the computer/language lab was not specific for language learning, but intended to serve multiple uses, such as serving as a conference room when necessary. In this meeting, administrator D, who had been my reliable source of information, also stated that there was little chance of replacing the software to correspond to teachers' want because all the budget had been spent (data source: school newsletter/December'95). In the end of this meeting, the problem of incompatibility was not resolved. The teachers received no further message from the change agents, either. They did not have an idea of whether the change agents wanted to modify the innovation or not.

During this period, a one-day CALL seminar, sponsored by the MOE, was held in a prestigious state institute of technology in the neighbourhood, which was intended to provide teachers with a general picture of what CALL was like. The host institution invited two teachers at most from each school to attend this workshop. However, due to the impact of the computer/language lab, nine English language teachers out of 16, including me, volunteered to attend it.

In February 1996
After the workshop, teachers started to ask for modifications. They hoped that the lab could provide them with audio/video facilities and the same model of the software they saw in the CALL seminar. I passed this message to teacher B, one of the English teachers, and expected him to transmit this message to the change agents, as he was personally close to administrator Y.

In March 1996
It had been three months since teachers attended the workshop and orientations. The change agents did not release any further message until
March. I received an internal phone call from teacher B. He told me that administrator Y would like teachers to purchase CD-ROM materials. As soon as teachers found any type of materials they liked on the market, they could purchase them. I passed on this message to the other English teachers, but no one took action to purchase any materials.

**In April 1996**

Although the lab did not respond to teachers' felt needs (see November'95 above), teacher B was the first one to try it out. The change agents might expect him to serve as a role model to encourage adoption from other teachers. However, because teacher B was a newcomer and had not developed an extensive contact with the others yet, only teacher P and me were invited to watch his performance using computers. However, after that, no one actually followed him to try out the lab.

**In June 1996**

During this period, teachers remained immobilized towards the purchase of CD ROM materials. Similarly, the change agents released no further messages, so teachers did not know when and whether this lab was going to be used. The first contact between the change agents and teachers was in the English teachers' meeting. Teachers were told that administrator X would be present.

In this meeting, administrator X constantly attempted to convince teachers of the value of computers. Teachers also tried to make her understand that computers did not serve the current needs. Teachers would only be sympathetic to the use of computers if the software could be replaced by the same model that they saw in the workshop. During the meeting, administrator X did not make any promise to modify the innovation because the replacement of the software meant an increase of budget. Neither did she promise that she would help teachers to negotiate for the additional
budget (data source: the minute of the English teachers' meeting/June'96 in Excerpt 6.8. in 6.4.5.2.2.2 below). No further messages were released by the change agents after the meeting. By the end of the academic year (i.e. the end of June'96), there had been no progress in resolving the problems. There was still a lack of clarity as to when and whether this lab was going to be used or modified.

The above was the whole innovation process. After I left the field, I learned from administrator D that this lab was never officially used in the English program. No English teachers, except for teacher B, had tried it out. Some other specialist-subject teachers had used these computers for CD ROM database reference during this period. Finally, this lab was officially reported 'out of order' in 1999. No one used it any more. In general, this innovation failed completely.

6.4. Analysing the outcomes
6.4.1. Model of innovation
As in the previous case study, this innovation was doubly centre-periphery in that the management was in a peripheral position relative to the Ministry and the teachers and students were peripheral to the management.

6.4.1.1. The first layer of the double centre-periphery model
At the first layer of the double centre-periphery model, the external examiners again adopted a delegating leadership style characterized by low supportive behaviour and low directive behaviour (2.3.). They did not clearly tell the school management how to act, then closely supervise their performance and monitor the process. Neither did they facilitate the school management in any decision-making or problem-solving. As discussed in case study one, it was the value-system of marketisation that caused the MOE to delegate completely. However, the adoption of a uniform delegating leadership style throughout the process resulted in the
problem of the institutional change capacity, as will be discussed later in 6.4.6.

6.4.1.2. The second layer of the double centre-periphery model

Leadership style

The change agents at the institution level did not show a high level of supportive behaviour, as in case study one. They did not listen to teachers by consulting them about the project. Neither did they encourage their involvement in problem-solving or decision-making. However, they showed directive behaviour in which they decided what facilities should be provided, where the lab would be located, and when the lab would be completed (see 6.3.4. August’95). However, the leadership style in this case study was slightly different from the directive leadership style (see 2.3.) in that the change agents did not finally force English language teachers to use the lab in class when they were unable to modify it as teachers’ request. In this sense, their leadership style was not so directive. I would rather address it as a semi-directive leadership style. However, as in a directive leadership style, a semi-directive leadership will only direct people to implement what is planned top-down and it is likely to promote token acceptance (see 6.4.4.).

Change agents in a power culture

Precisely speaking, the power culture at this institution (see 5.4.1.2.1. in Chapter Five) was characteristic of its hidden power structure in which the actual power holders exercised their influence behind the scene. In other words, the people who were assumed to be in charge of the innovation were not the actual change agents. It was the power centre underlying the institutional structure that owned the ultimate control over all policies, including budget planning, budget spending, and personnel policies, etc. In such a power culture, the actual power structure always operates underneath the formal structure and only insiders can perceive where the
power is. The hidden power culture in this case study corresponded to the ‘hidden cultures’ described by Kennedy and Kennedy (1998: 464). They point out the likely existence of the hidden culture that actually operates under the surface of the structure, so one cannot assume that ‘the “surface” structure represents the reality’ (ibid.). Since administrator X and administrator Y gained authority by means of their connection power (see 5.4.1.2.1 in Chapter Five), they did not have the problem of empowerment. In case study one, we found the change agents ineffective partly because they were not empowered completely and partly because they lacked adequate expertise in implementation. By comparison, change agents in this case study had full power to decide the content of the innovation. In terms of their experience and educational background, neither of them specialized in ELT or CALL. However, it is extremely important that an effective change agent needs to have adequate expert knowledge so that s/he is able to fulfil the responsibilities successfully (see 1.2.1.). The unsatisfactory performance in the outcomes show that empowered change agents without adequate expertise were as ineffective in effecting innovation as those in case study one.

6.4.1.3. Change strategies
In the double centre-periphery model, we saw that the external inspectors at the ministry level and the change agents at the institutional level all adopted a power-coercive strategy to manage change, as in case study one. That is, they both used the authority within the educational system to push other people to act differently. The change agents might consider that an improved facility would satisfy external inspectors, in the belief that the more advanced the facility, the better it looked. However, although a power-coercive change strategy will push others to act differently, it has been shown to be ineffective in many English-speaking countries, as it only pushes people to accept innovation without necessarily implementing it (2.2.1.). Teachers' reactions in this case study (see 6.4.4. below) revealed
that the adoption of a power-coercive change strategy only made teachers do the minimum in the change but without positive commitment. These data confirm that the use of power and coercion is ineffective not only in many English-speaking countries, but also in Taiwan, a Chinese-speaking context.

On a higher level, the absence of a normative-re-educative change strategy also shows that the change agents largely neglected the issue that the use of new technology will bring in new practices that require teachers to change their performance through exploring new skills and new conceptions. The change agents fell into the common mistake in many projects that innovation is introduced with inadequate knowledge of implementation, including too little time for teachers to learn new skills and practices and lack of assistance and other forms of intensive teacher development (see Table 1.3. in 1.3.). For instance, the failure by the early adopter to produce changes in conceptions and role behaviour, which is going to be discussed later in 6.4.5.1.2, was indeed a consequence of the absence of a teacher training program coupled with a normative-re-educative change strategy. Research on developing teachers' skills and changing their established belief proves that normative-re-educative change strategies are effective in involving 'changes in attitudes, values, skills, and relationships' (Markee 1997: 67; also see 2.2.3.). However, the change agents did not attempt to engage teachers in their ideological change by adopting a normative-re-educative change strategy, which reveals their inadequate knowledge of implementation. These data highlight the importance of outside expertise in innovation management. Change agents need to be able to adopt appropriate strategies at different stages of implementation to achieve the desired goals, and ensure that their deliberate, novel, specific change has been 'more efficacious in accomplishing the goals for a system' (Miles 1964:36; see 1.1.).
6.4.2. The attributes of innovation

This section examines the factors that potentially promoted resistance from teachers and then affected their adoption behaviour. Because our data show that English teachers had different opinions and attitudes towards an audio/video lab and a computer/language lab, I will discuss the attributes of both.

1. Complexity

Because the video/audio facilities, e.g. cassette players, speakers, earphones, etc., are very common in most families in Taiwan, teachers would feel confident about the handling of those facilities, even though in reality they might find a language lab complex and difficult to use if making full use of its possibilities.

By comparison, computers were a new technology to teachers, so they were insecure about the handling of computers. Bracamonte (1999: 89) has mentioned several features that make teachers perceive the use of computers as highly complex. They seemed to be applicable to this case study, too. For example,

1) Teachers are expected to operate and solve problems at two levels at the same time. The first one is technical level: if technical problems arise, e.g. the program does not load, students press the wrong keys, a program crashes, the teacher is expected to solve the problem. The second one is pedagogical level: the teacher must still answer language questions, make the class interact, conduct activities, guide, correct, and so on.

2) Materials have too many different sub-menus, and programs are difficult to remember and locate.

3) There are few specialists among teachers.
4) Teachers have a humanistic, rather than a scientific background.

When teachers perceive the operation of computers as highly complex, it is common to find them nervous and reluctant to learn how to use technology, particularly when teachers are expected to work on it with their students before they feel secure in their own mastery. It is very likely that fear of the unknown or fear of looking stupid (Plant 1987) among teachers becomes a psychological barrier (2.5.5.) to the adoption.

2. Trialability
If teachers decide to try out an innovation, they would prefer to start with something that is easier to operate. A well-equipped audio/video lab would provide facilities other than tape/video players. Teachers could start to use the basic facilities which they were familiar with. Then, after a period of familiarization, they could decide to try out new equipment step by step.

By comparison, most teachers in this case study did not know how to operate computer hardware and they did not have easy access to the use of computers. As teacher P complained, the teachers' office was not equipped with computers, so she could not learn how to use computers (Excerpt 6.2. below). Because the computer/language lab provided only computers, this all-or-nothing adoption would make teachers hesitate (Markee 1997).

Excerpt 6.2.

(Informal conversation)
Teacher P : the authorities asked us to use the lab, but our office is not equipped with a computer. We have asked for it since the last semester. Now I do not have an idea of how to operate computers.
3. Relative advantage
Teachers perceived two relative advantages of audio/video equipment (Excerpt 6.3. below). First, most existing materials were accompanied by videos or tapes, so an audio/video lab would be very helpful to maximize the utility of such materials. Secondly, because currently teachers had to play tapes in an ordinary classroom, the noise often travelled to the next-door classroom and disturbed others. Therefore, the facilities of video/tape players in a lab would resolve the current problem of noise and also bring better audio effect.

However, teachers did not perceive any relative advantages of the use of computers. Instead, they discovered several disadvantages (Excerpt 6.3. below). First, teachers had to spend additional time and energy learning how to operate hardware and software. Secondly, both teachers and students had to prepare themselves for the new materials from the CD ROMs, in addition to the current textbooks. This would increase the workload for teachers and also increase the learning load for students.

4. Compatibility
Teachers had been using cassette players, together with textbooks, in the past and were doing so right now. Therefore, a lab providing tape/video players was consistent with the existing practice and past experience of the teachers and students.

However, the computers did not comply with the existing practice at all because they were not compatible with cassettes and videotapes (Excerpt 6.3. below). Their CD-ROM materials were also not compatible with the current textbooks, either (Excerpt 6.3. below).
Excerpt 6.3.

(The minutes of English teachers’ meeting/November’95)

Teacher A: Over the past days, I heard some teachers complaining about the impracticability of computers in the lab. They seemed to not to use the lab. (teachers' antagonism) When we were students at the university, we were provided with audio/video facilities to learn English. Now we are given a lab that is different from our past experience. Besides, the problem of noise remains unresolved.

Teacher P: the use of computers did not respond to our needs. We need video/cassette players and other audio facilities more badly than computers. I need a lab where I could play tapes that accompanied the current textbooks. I could choose to speak to an individual student or all students through audio facilities. And students could reply me through audio facilities, too. I also could monitor how students talk among themselves. So far the software program only provided one-sided broadcasting from teachers to students through speakers. However, we teachers need to hear speaking from students because we have to monitor their pronunciation. In my class, I often ask students to do role-play, so I have to monitor their conversation. Besides, in the orientation I asked the speaker how to deal with students' misbehaviour if they played computer games in class. He could not give an answer. He did not know teaching at all. Actually, I do not need computers. I do not want to use them. (teachers' antagonism)

Teacher O: the introduction of computers is not an easy task. Most teachers do not know how to operate the software program and computers, so we have to spend additional time learning how to use them. Currently, we have the textbooks as our teaching materials, so the CD ROM materials will cause additional learning load and teaching load. We also have a problem of choosing appropriate materials from a variety of CD ROM materials on the market. We are given a lab, but we are not given a lab with cassette/video players to play tapes. I agree with teacher P. We do not need computers at all. (teachers' antagonism)
5. Observability
Because the teachers had past experiences in the use of video/audio facilities, the successful results had been visible to them. By comparison, the results of CALL were not visible to teachers because they did not have experiences in integrating computers into classrooms.

The above comparisons of attributes between an audio/video lab and a computer/language lab illustrate two different types of adoption behaviour by teachers. Because teachers perceived a high level of relative advantages, trialability, compatibility, and observability, but a low level of complexity from an audio/video lab, they were supportive of the project in the very beginning when they expected it to provide them with basic audio/video facilities.

However, teachers perceived a low level of relative advantages, trialability, compatibility, and observability, but a high level of complexity from a computer/language lab. The teachers' various reactions to the use of computer/language lab illustrated how those unfavourable attributes negatively affected teachers' adoption behaviour. As we saw, this was indeed a consequence of the ineffective change agents who unfortunately failed to examine the attributes of the innovation beforehand and resolve them accordingly. They also did not consult teachers about their teaching needs, so the change was perceived as irrelevant by teachers.

6.4.3. Teacher ownership
Markee (1997 : 179) has indicated that the best way of having attributes favourable for adoption is to ensure that teachers feel that they own the innovations they implement. Indeed, designing a well-equipped lab requires a high level of expertise that is beyond most English language teachers' professional background (see 'complexity' in 6.4.2. above). If teachers would like to implement what they have decided and designed, they
first should be well trained in the innovation proposed. The highly positive response to the one-day CALL seminar referred to in 6.3.4. 'December 1995' showed that teachers realized a need for gaining outside expertise so that they could have a better understanding of the innovation proposed.

In this seminar, several speakers from universities presented different issues of CALL (see Appendix 3-1). Critically, the English language teachers from the host institution held a 90-minute workshop, demonstrating the use of hardware and software (Appendix 6-1). After having witnessed the ways the host institutions implemented a CALL program, teachers made a comparison between the institution under study and the institute of technology that they had visited, in terms of decision-making process and the software program, etc. The English program presented in the workshop was intended to enhance students' speaking and listening and the classroom procedure was set to allow two-sided broadcasting between teachers and students or between students and students. All teachers understood and agreed on the aim and the procedure before the program was set in motion. Then, the software program and facilities were designed to achieve the aim. Also, the CD ROM materials presented in the workshop were exactly the ones being used in the current English program, so they were compatible with the existing practice, and did not cause the problem of increasing learning load for learners or teaching load for teachers. In general, this one-day outside seminar had some positive effects on teachers. First, it is significant that teachers started to realize the importance of teacher ownership. They wished that they could have been consulted about teaching needs right from the beginning so that the software program, facilities, and CD ROM materials would be compatible with teachers' existing practice and materials, as in the state institute of technology they had visited (see Excerpt 6.4. below). Secondly, teachers seemed to be getting more sympathetic to the use of computers and started to ask for the modifications to serve their needs, rather than merely acting as a passive
receiver. Indeed, at this messy stage there was an opportunity for this project to be accepted by teachers. However, this chance was wasted due to ineffective conflict management by the change agents. Insufficient and ineffective communication throughout the process made the conflicting views between two parties unresolved. The problem of communication will be discussed later under the communication mechanisms.

As discussed so far, perhaps the reason why teachers did not question the ownership was that they were not confident enough in the beginning to play a key role in decision-making until they gained a general picture of CALL from the workshop. However, Markee (1997) has indicated that teachers' consensus on how the innovation should be implemented is extremely essential to facilitate adoption and ensure implementation. Although teachers lacked expertise and could not design their own innovation in CALL, the change agents still had some opportunities to change participants' adoption behaviour from resistance to acceptance if they could have sought to obtain the consensus from all participants on how the innovation should be implemented and made modifications where necessary, thus spreading ownership.
Excerpt 6.4.

(Casual questioning: when teachers were asked about their view of the visit to the one-day CALL seminar)

Teacher N: It seems that our decision-makers did not have any sense of system. They did not even ask us for the opinions before they established this computer-language classroom.

Teacher A: The English teachers in the state institute told the computer company what they wanted in English teaching, and then the computer company supplied the facilities.

Teacher P: Compared to the Institute we had visited, our lab is just a computer room, not a computer/language lab. The authorities should have asked us for opinions before they purchased the equipment. I will consider using the lab, if our software can be replaced with the same type of software we saw in the workshop.

6.4.4. Teachers' reactions

Throughout the innovation process, teachers were treated as passive receivers. The outcomes showed that within the innovation period of 10 months (between the end of August 1995 and mid-June 1996) teachers reacted to and coped with change in a variety of ways, from rejection to compliance. Morrison (1998 : 122), based on Harris' (1987) five responses to change, suggests a continuum of reactions to change, including: 1. antagonism 2. indifference 3. compliance 4. positive commitment (see 2.5.5.). I would like to add 'early enthusiasm' to Morrison's continuum. I also relate teachers' reactions to this continuum and arrange them in a sequence.

Early enthusiasm

In the very beginning, English language teachers were enthusiastic about the innovation and held the positive attitude towards it, as they expected it to
provide them with better audio/video facilities for language teaching.

**Antagonism**

After the orientations, they started to realise that the lab was installed computers only, without cassette players or video players. When they discovered the problems of incompatibility, they changed their positive attitude. The minutes of the English teachers’ meeting in November’95 showed that teachers seemed to have antagonism towards the use of computers (see the sentences underlined in Excerpt 6.3 in 6.4.2. above). However, after the one-day seminar, it seemed that teachers would only be sympathetic to the use of computers if the software could be replaced by the same model that they saw in the workshop.

**Indifference**

Almost three months after teachers pointed out the problems of the lab, they received no response from the change agents. Teachers might have felt their opinions were not paid respect and their self-esteem was hurt. Therefore, they turned out to be indifferent. Teachers’ indifference could be seen in the matter of the purchase of CD-ROM materials. After I got the message from teacher B and passed it on to the others, to my surprise, five teachers out of six did not respond to me at all (Excerpt 6.5. below). The teachers’ silence towards the purchase of CD-ROM materials surprised me. This was an unusual response. As far as I observed, teachers always discussed pedagogical problems and shared their experience with each other. Several opinionated teachers, such as teachers P, N, and O, were always enthusiastic in discussing with each other. But now they did not even bother to complain as before. Neither did they bother to ask me for further message. Their total silence seemed to be a sign of indifference. Teachers seemed to express their frustration and disappointment in indifference. Stephenson (1994) in her study in Sao Tome and Principe finds that when teachers are invited to comment on the innovation at a
relatively late stage, they will feel that they are simply paid lip-service and they will lack commitment as a result.

Excerpt 6.5.

(Internal phone call: the writer answered the phone from teacher B.)
Teacher B: administrator Y told me that the English language teachers are welcome to buy CD-ROM materials they judge as good. Just keep the receipts and the money will be returned.

The writer: How about the software program? Is the management going to replace it?

Teacher B: No. It takes more money to do that.

(Later, I passed on this message to the other teachers, teachers N, M, P, L, R, and O, but they did not have any response to my message. They remained silent and did not even ask any further questions or make complaints as before. To break the silence, teacher M started to make suggestions. She suggested that teachers could go to the big bookstores to purchase the materials. To my surprise, no teachers responded to her, either.)

Compliance
As mentioned earlier, a power-coercive change strategy tends to force people to accept change. Therefore, teachers realized that they would finally have to adopt this lab against their will and did the basic minimum in the change when the change agents started to exercise coercion over them. In a power culture, the relationship between the change agents and adopters is typically boss-centred. Teachers seemed to perceive themselves as employees and felt that they had to be compliant with the policy. The attitude of compliance was seen when two teachers were asked about their willingness to use the lab in June 1996 (Excerpt 6.6. below):
As discussed so far, positive commitment was not found in the teachers’ reactions. As we saw, teachers’ non-commitment was a consequence of the unfavourable attributes of the computer/language lab. Those unfavourable attributes also indicate the failure by the change agents to foster teacher ownership. This is characteristic of a power culture that teacher ownership is often largely neglected. However, as discussed in 1.4.1.3., educational change that does not involve and is not supported by teachers will be unlikely to succeed.

6.4.5. Two-in-one innovations
6.4.5.1. Primary innovations
As in case study one, this section adopts Markee’s two-in-one innovation model to examine whether this project under study conformed to such a model and recasts the same observation into a new framework. Regarding primary innovations, as discussed in the previous sections, the change agents simply introduced technology, but made no attempt to offer information like suggestions of ways to use the program. What constitutes good teaching in the use of computers was not demonstrated, either. However, it is insufficient to introduce change in content, without requiring changes in skills and value. Innovation via the use of technology is extremely complex. Grabe and Grabe (1998 : 19-21) indicates that teachers not only have to learn to use the technology, but also have to learn how to facilitate learning with technology. In 1.1., we have mentioned that innovations are ‘intended
to bring about improvement in relation to desired objective...'(Nicholls : 1983), so our main concern is whether the use of computers would facilitate learning and bring about better practice than the conventional classroom. The literature has identified two categories of barriers which most people will encounter while integrating technology into teaching: first order barriers and second order barriers (1.3.3.). In the following sections, I am going to relate our case study to these barriers to technology integration and discuss the failure of implementing the primary innovations.

6.4.5.1.1. First order barriers to technology integration
According to Brickner (1995), the first order barriers are extrinsic to teachers and they are not difficult to resolve because it is assumed that once adequate resources are obtained, such as providing additional facilities and computer-skill training, integration will follow (see 1.3.3.). However, we saw that the first order barriers remained as a major impeding factor throughout the process, as the change agents neglected teacher ownership in the beginning of the process and failed to modify the original plan in the end. Therefore, it may not be right to think that the first order barriers are always easy to solve when the institutional barriers support them, such as lack of professional change agents or lack of budgets as illustrated in this case.

6.4.5.1.2. Second order barriers to technology integration
It is very common that people resolve only first order barriers when they limit innovation to first order change, i.e. to replace what is currently done, but 'without disturbing the basic organizational features, without substantially altering the way that children and adults perform their roles' (Cuban 1988: 342; also see 1.3.2.). The early adopter’s performance in our case study was an example to illustrate the failure to implement second order change (ibid.). Teacher B acted as an early adopter and had some of the characteristics of an early adopter (1.2.2.). He was highly educated and also personally close to the change agents. Critically, he had
experiences in the use of computers when he was doing his degree in the U.S.A. However, teacher B failed to persuade his peers of the effectiveness of the use of computers because his lesson using computers did not prove to be any different from the traditional classroom in terms of activities, the role of teachers, and the role of students (see Appendix 6-2). This confirms Markee's (1997) observation that adoption behaviour by a role model does not always succeed in influencing his/her peers. First, teacher B adopted the teacher-centred approach throughout the lesson and seldom created the opportunities for student talk. Secondly, his lesson largely used the technique of grammar-translation. He explained word for word in Chinese and translated the sentences into Chinese when he clicked on the sentences underlined and came with the written explanation on the screen. Although he had made efforts to get familiarised with the use of hardware and software, he was not aware that the traditional roles of teachers and learners in which teacher-talk was at the centre were no longer applicable. His lesson using computers resembled the conventional lessons using textbooks in which teachers are knowledge-transmitter and students are passive receivers of subject matter. No evidence showed that teacher B had understood the new teacher role as a facilitator and then attempted to adjust his behaviour to it.

Nevertheless, the early adopter's unchanged behaviour highlights the problem of the second order barrier to technology integration. The literature stresses that if people want to exploit the effectiveness of technology, they not only have to know how to operate hardware and software, but also have to implement two dimensions: the use of new activities, behaviours or practice and changes in beliefs and understanding (see 1.3.3.). These two dimensions involve several changes by teachers: playing a new teacher role as a facilitator, reducing the importance of teacher talk, and designing activities sensitive to individual students' problems and achievements, etc. Sergeant (1999; 1.3.3.) in his research study also
stresses the importance of embedding CALL in the curriculum. Ways of embedding CALL in the curriculum require ideological changes in the relationship of teacher-student, changes in teaching methods, and changes in assessment procedures, etc. People tend to resist change in their established classroom practices and teaching values, but technology integration cannot succeed without achieving second order change (Brickner 1995). Therefore, because the teacher’s and student’s role behaviour remained unchanged, it is questionable whether this early adopter’s adoption of computers would produce new practice that is fundamentally different from traditional teaching. We cannot expect that the use of computers in this case study would bring about better practice and lead to the larger process of innovation when there was no second order change.

6.4.5.2. Secondary innovations

So far, failure to integrate technology by developing new skills and new role conceptions was predominately caused by lack of support from adequate training and effective communication among participants on all levels. This was indeed a consequence of the change agents’ semi-directive leadership style. The change agents lacked supportive behaviour in fulfilling the responsibilities, such as providing access to teacher training, providing supporting resources, and devising feedback mechanisms, etc. (see 1.2.1.). Failure to implement secondary innovations in order to enable primary innovations, together with the above unfavourable attributes, set up obstacles to the adoption and implementation.

6.4.5.2.1. Teacher training programs (a training mechanism)

Just as in case study one they failed to provide any research programs to develop teachers’ capacity to commit to change, the change agents in this case study also neglected the importance of teacher training in CALL. Only one orientation (the second one of the two orientations) was held to provide the instructions for and the presentation of running the program.
The weaknesses of their procedure can be seen clearly by a comparison with the workshop held at the state institute mentioned above. The project in our study did not contain the same features as the workshop to persuade teachers of the effectiveness of computers. First, the change agent in the workshop was one of the English teachers and worked together with them in the same department at this state institution. She held a first degree in English teaching and obtained her PhD degree in CALL in the USA, so there was no question about her expert knowledge. She demonstrated her professionalism by giving all participants a clear framework regarding the learning theory (i.e. the collaborative learning theory) to adopt, teaching objectives to achieve (listening and speaking skills), and the related procedure to be done in class. Secondly, the other English teachers working in the state institution took turns demonstrating the procedure in the use of software, in relation to the theory and teaching objectives. They all had a master’s degree in CALL, so they already had background in the use of computers and training in language teaching. However, the change agents in our project did not have any background relevant to CALL and failed to demonstrate their professionalism throughout the process by defining the aim and objective, clarifying the teacher/student role, and providing information about the content and background. Instead, they left all the essential issues (the learning theory, teaching objectives, etc.) to the computer technicians who were mainly responsible for the technical problems of the hardware and software, etc. Among the teachers, only one teacher (teacher B) already had certain experience in the use of computers and none of them knew anything about CALL. The one-off orientation not only failed to provide teachers with necessary skills and expertise, but also failed to state adequately several aspects reported in the literature to make teachers understand the characteristics of the specific software program. For instance, ideally the training program should provide teachers with the following aspects (Hawkridge 1983):
1. Statement of aims and objectives
2. Information about the content and background
3. Statement of intended type of use and audience
4. Suggestions of ways to use the program
5. Pupil activities and worksheets
6. Instructions for running the program
7. Presentation of a typical run
8. Problems anticipated

Except for the instructions for running the program and the presentation of a typical run, the other issues were completely absent in these orientations. The speakers who were the technicians from the computer company did not address the other equally important issues to help users understand the characteristics of the specific software and failed to give teachers training in CALL. However, the integration of computers into the classroom requires a high level of expertise from teachers. Teachers require outside expertise by cooperating with outside experts in various forms. Grabe and Grabe (1998: 113-114; 1.3.3.) suggest several opportunities for increasing teachers' expertise in CALL: attending a conference; taking a class or workshop; browsing through magazines for educators; communicating directly with software companies. Change agents need to be competent in organizing these training programs to provide adopters with the outside expertise needed. Unfortunately, prior to the innovation, the change agents in this case study failed to create those opportunities for teachers. No teacher training mechanism had been established to equip teachers with the knowledge of CALL or train them in the use of hardware and software. On a higher level, lack of a teacher training program coupled with a normative-re-educative change strategy to engage teachers in changes in role behaviour and role conception, as mentioned in 6.4.1.3, was a major reason for the failure of second order change (see 6.4.5.1.2). As in case study one, lack of a training mechanism was one of the most impeding factors that
inhibited innovation.

6.4.5.2.2. Communication mechanism
In 2.5.4., we have mentioned that effective communication throughout the innovation process is a key to successful innovation because it not only gives adopters a rationale and direction of the innovation, but also creates opportunities for resolving potential conflicts. (2.5.4.) Morrison (1998: 140) also points out that it is necessary to maintain as much communication among project participants as possible to resolve conflicts because postponing them will worsen the situation. The following sections will examine two aspects: communication channels and strategies for managing conflicts.

6.4.5.2.2.1. Communication channels
In case study one, the change agents (e.g. the principal) could diffuse the innovation through formal, established communication channels. They took the opportunity of the general-affair/administration meetings (or school newsletters) to transmit the message of the innovation to the teachers (4.4.1.; 4.4.3.3.), which was a top-down communication channel. On the other hand, the teachers transmitted their opinions to the change agents through the minutes of the English teachers' meetings or through teacher B (see February'96 in 6.3.4.), which was an indirect communication channel. However, the analysis in the previous case study proved that such a communication mechanism was ineffective in the success of the innovation.

By comparison, the change agents in this case study did not take opportunities (e.g. orientations) to meet teachers for face-to-face communication. They did not attend the CALL seminar together with teachers to gain more expertise in CALL and to understand teachers' attitude towards it. All information from the change agents was transmitted through a third party. For instance, teacher A was first informed of the
development of the innovation in the beginning of the academic semester and she was asked to pass it on to other teachers (6.3.4. 'August'95'). Teacher B was asked to inform all English teachers of the purchase of CD-ROM materials (see 6.3.4. March'96). 'A third party' seemed to be the communication mechanism. Consequently, this poor, indirect communication seriously blocked the interaction between two parties. As we saw, this was a consequence of the hidden power (6.3.2; 6.4.1.2.). The two change agents represented the hidden power, so they tended to transmit messages behind the scene. As in the previous case study, the communication barrier (also see 2.5.4.) was a fatal cause of the non-implementation. This was an example of the concealed agency of the innovation causing communication problems for the innovation, which also reflected the structural problem of this innovation.

6.4.5.2.2.2. Conflict management

As a result of the communication barrier, the conflicts between two parties remained unresolved. We may expect that the relationship between the change agents and teachers would be affected more or less and the results would not be satisfactory. Although the exercise of power or coercion can push people to act differently, participants will feel reluctant and offended when change agents do not resolve the conflicts and persuade participants into commitment. Therefore, to achieve satisfactory results and at the same time maintain a good relationship, it is necessary for change agents to seek appropriate strategies to manage conflicts. In 2.6. we have mentioned that people choose their style of managing conflicts depending on their different degree of 'concern for relationships' and 'concern for results'. Based on the two concerns, the ways of coping with conflict have been identified: avoidance strategies, smoothing strategies, fighting strategies, and problem-solving strategies (see 2.6.). I will in this section discuss the strategies adopted by the change agents to cope with conflicts and explore the likely factors that affected their choice of strategies.
An avoidance strategy

It is very common for many people to avoid taking responsibility for failure and blame each other. In the beginning of the innovation process, the change agents in our case study seemed to react the same. Since teachers had a lot of criticisms about the innovation, the change agents were psychologically inclined to blame teachers to avoid responsibilities. For instance, when asked about her role as a message-transmitter, teacher A (one of the English teachers) expressed that she was frustrated when the change agents blamed her for being incapable of transmitting the information (Excerpt 6.7. below). Instead of admitting their incompetence in resolving the first order barriers, it seemed that the change agents blamed teachers for their incomplete understanding of the innovation. They failed to face the problems and resolve them accordingly, which appeared to do no good to the results and damaged the relationship.

Excerpt 6.7.

(Casual questioning)
Teacher A: I was really upset. I was blamed by both teachers and the management. They all blamed me for not transmitting the messages effectively. In fact, I knew nothing about using computers and CALL.

To restore a harmonious relationship, it is necessary to resolve conflicting views through an effective communication mechanism. However, as mentioned earlier, the change agents did not carry out any form of direct communication. ‘No response’ was the same strategy the management had taken to deal with teachers’ proposal for audio/video facilities over the past years (see 6.2.). In other words, the change agents adopted 'avoidance strategies' to avoid facing the problems, in the hope that the conflicts would go away. As a participant-observer, I wonder whether the change agents were really concerned about the results of the innovation. If yes, why did
they not come forward as early as possible to resolve problems so that they could restore a harmonious relationship with teachers and at the same time facilitate adoption? If not, why did they have low concern for the success of such an expensive investment?

Perhaps face-threatening made the change agents adopt an avoidance strategy. The aspect of the Chinese pre-occupation with face, which is a typical Chinese phenomenon, has been discussed in many cross-cultural studies (see Scollon and Scollon 1994; Chang and Holt 1994). The ineffective strategies adopted by the change agents indeed reflected the change agents' psychological profile. If they agreed to modifications, they felt as if they admitted their incompetence in managing innovation. They were afraid that they would lose face and their authoritative image would be harmed. Therefore, they were psychologically reluctant to admit mistakes by adopting an avoidance strategy.

Another reason why the change agents avoided facing conflicts was associated with the power barrier (2.5.2.). It seemed to be hard for the internal change agents psychologically to give away any control of decision-making, particularly in budget planning and budget spending. In ideal circumstances, English language teachers should be involved in planning so that they can decide on the appropriate software and equipment that will serve their felt needs. In doing so, the teachers have to be empowered to a certain extent to have a voice on the budget planning and spending. However, in this private-enterprise institution, the owners conventionally perceived the full control of budget as their exclusive privilege. There was no exception in this case study. Because the computer/language lab would cost a lot of money, the change agents, on behalf of the owners, would like to maintain the exclusive control over the overall costs, including the purchase of their preferred type of software and model of computers. Therefore, they might perceive it as a threat to their
power base if they agreed to modify as teachers' request. Such a power barrier also explains the reason why they excluded English teachers from decision-making right from the very beginning and why they could not concede to modify the plan in the end.

**A smoothing strategy**

Although the change agents had constantly adopted an avoidance strategy in response to teachers' criticisms, the following event showed that they also adopted a smoothing strategy (see 2.6) to make teachers feel less offended and resistant. Three months after the orientations, they started to shift teachers' attention from the issue of incompatibility to the purchase of CD-ROM materials. Instead of blaming teachers, the change agents invited teachers to play a part in the purchase of CD-ROM materials (see 6.3.4. March'96). This is a strategy attempting to reduce teachers' resistance by giving them a bit of ownership at a rather late stage. However, when teachers are simply paid lip-service, they will lack commitment as a result (Stephenson 1994). This is the same in this case study. The reactions of indifference by teachers (see 6.4.4. above) proved the ineffectiveness of a smoothing strategy, as it did not bring about satisfactory results and amend relationships, the same as an avoidance strategy.

**A fighting strategy**

Two months after the use of a smoothing strategy, the change agents seemed to realize that conflicts would not go away if they did not take any action. Just right before the end of the academic year, they decided to have a direct talk with English language teachers and started to show more concern for the results. The first direct contact between the change agents and English language teachers took place in the English teachers' regular meeting in June 1996. It was six months after the lab was completed. In the meeting, administrator X constantly attempted to persuade teachers to use whatever was available, but without an attempt to make adjustments as required by
teachers (see Excerpt 6.8. in bold below). At this phase she was adopting a fighting strategy by insisting on the original plan. However, fighting strategies are likely to damage a relationship and they will not do any good to the results, either (Everard and Morris 1990). After administrator X realized that she could not persuade teachers to ignore the problem of incompatibility, she stopped the use of a fighting strategy to avoid a more serious damage in relationship with the teachers. On the other hand, she did not promise teachers to replace the existing software, either. The use of fighting strategies finally proved to be as ineffective as the use of smoothing or avoidance strategies.

An avoidance strategy
Indeed, in this meeting, the teachers explained the reasons for non-adoption and tried to make administrator X understand why they perceived the existing software as incompatible. They adopted a problem-solving strategy (2.6.) by proposing a solution, which indeed provided the best opportunity for both parties to seek feasible solutions and maintain a good relationship with each other. They suggested that the software should be replaced and audio/video facilities should be purchased (see Excerpt 6.8. in bold below). Unfortunately, administrator X failed to perceive the advantage of problem-solving, and failed to take responsibility for ensure supporting resources were available (1.2.1.), which made conflicts unresolved. She dodged the budget issue and went back to the avoidance strategy again. In fact, the problem of the incompatibility and inadequacy of facilities had been transmitted by teacher A in the administration meeting (see 6.3.4. December'95) six months before this meeting. If administrator X really wanted to purchase additional facilities requested by teachers, she would have asked for additional budget from administrator E, who was her husband and also one of the power members, rather than postponing the budget issue for six months. The outcomes showed that the change agents did not modify as requested. Modifications meant an increase of budget,
which might go against the change agents’ wish. Neither did they mention the innovation again or force teachers to use the lab. Perhaps face-threatening and the power barrier as discussed earlier prevented the change agents from adopting a problem-solving strategy. Maybe the history of failure meant that they could not make themselves talk to teachers or even force them. In general, the change agents in this case study tended to adopt an avoidance strategy most of the time to deal with problems or conflicts, in the hope that they would go away, which proved to be harmful to both the relationships and the results. They failed to face the conflicts as early as they could and did not resolve them in a problem-solving model. All this illustrates the failure of a power-coercive strategy unaccompanied by an effective strategy of conflict management.

These data confirm the accuracy of constructs like avoidance strategies and fighting strategies. The literature has indicated that avoiding problems cannot resolve conflicts because it simply buries rather than solves the problems (Carnall 1995; 2.6.). Fighting against teachers’ perceived viewpoints only suppresses teachers’ resistance and promotes token acceptance, which will intensify the conflicts, rather than resolve conflicts (2.6.). Because it is inevitable to have conflicts among participants in the innovation process, a problem-solving strategy is considered to be lasting, as it lets two parties in conflicts work together towards an agreed solution to resolving the conflicts. These data highlight the importance of skills in conflict management, and illustrate that many project developers are eager to develop an innovative idea, but do not know how to manage conflicts arising from the innovation process.
Excerpt 6.8.

(The minutes of the English teachers' meeting/June'96, from 12: 30pm to 1:20pm)

Administrator X : (this is her first time to turn up in the English teachers' meeting.) I am planning to have another two computer labs next semester. Also, I heard about that some of you are not familiar with the computer lab. Is the reason why you have this attitude because : 1) you know nothing about computer itself, or 2) our college's computer program is not suitable to you ?

Teacher A : Luckily, we have administrator X here today, so we can discuss the issue of computer lab and express our opinions. Frankly speaking, I know nothing about computers. But we teachers attended the multi-media seminar six months ago at the state institute of technology. As far as I know, this Institute had good communication with the computer company (supplier) before starting planning the computer lab. Their English teachers told the computer company what teachers wanted for English teaching, and then the computer company provided the equipment and the software program, according to the needs of English teaching. Thus, the software program they use can be interactive between teachers and students. Later, every teacher can express our opinions to administrator X and discuss.

Teacher P : Actually we English teachers did not resist learning and using the computer lab. We have spent two Wednesday afternoons learning using computer lab. But the computer company was unable to explain very clearly. Besides the computer company also could not operate the CD ROM successfully at that time.

Teacher B : (interrupting teacher P ) but now the CD-ROM can be played.

Teacher P : (ignoring teacher B and continuing ) the lab we need is to let students and teachers interact with each other. Now the system we have is only to broadcast. Teachers are able talk to students through headphone. But students cannot talk to teachers. In class, we English teachers always make a student talk to another student, or teachers ask a question and then this student answer back. That is why this computer system is not suitable to us. Our computer supplier does not have any idea of English teaching. They did not know what we teachers want from their program. Therefore, the software program they provided does not serve our needs for English teaching. The current computer lab we have is just a computer room, not a computer language lab.

A good computer language lab has to be equipped with cassette/tape players, and speakers, etc., in addition to computers. And it takes more money to have such equipment. (The adoption of a problem-solving strategy)
Administrator X: You all cannot ask for so much at the beginning stage. We can go on step by step. You all need to use the room first in order to know its weakness. The computer lab is the most advanced equipment, and it is a trend to use computers in the future. Our college is ahead of the other colleges. The current program does not have such interaction functions. You all need to learn and use the room first to know the strength and weakness. (The adoption of a fighting strategy, without an attempt to accept problem-solving)

Teacher P: It is not right. We last semester went to the state Institute of Technology. It had the software program that could do interactive teaching on computers. (The adoption of a problem-solving strategy)

Administrator X: I was told that this Institute has only 25 computers, but we have 55, better than them. (The adoption of a fighting strategy, without an attempt to accept problem-solving)

Teacher P: Ironically, we teachers are not given a computer in our office. We have asked for it from the last semester.

Administrator X: It is a matter of money. It is also a matter of security. Besides, not every teacher knows how to use the computer. (The adoption of a fighting strategy)

Administrator R: (the staff member from the Teaching Affairs Office): O.K. I can promise you a computer, I will discuss with the dean.

Administrator X: [Silence] (Actually she was the decision-maker, but she did not give any comments.) (The adoption of an avoidance strategy)

[Pause] ... Administrator X: ok, the replacement of software needs more money. You all can turn to administrator E for additional budget. (Then she kept silent again.) (The adoption of an avoidance strategy)

(Now, it seemed it was time to end the discussion. It is nearly 1:15 pm, and several teachers left the meeting for their class. The other teachers started to turn to the other topic of textbook selection ...)
6.4.6. The institutional change capacity

The analysis so far shows that the change agents failed to implement innovation in a two-in-one model, as in case study one. They did not attempt to implement the secondary innovations to enable the primary innovations. Failure to implement two-in-one innovations highlights the importance of developing the institutional capacity to innovate. Two major factors were responsible for the underdeveloped institutional change capacity. First, because of the delegating leadership style, the MOE did not allocate adequate resources to support implementers. There was no follow-up administration from the inspectors at the ministry level to facilitate the problem-solving of people inside the institution or to provide them with adequate outside expertise to develop their change capacity. Secondly, there was a problem with the power culture where people in power often do everything if they could, but they do not necessarily have adequate expertise (2.1.). As mentioned in 2.1, the principal drawback of the power culture is that the success of innovations will entirely rely on the ability of the person in the power centre. That is, if s/he is adequately professional, then innovation will be more likely to occur; if s/he is inadequately professional, then innovation will be less likely to occur. In our study, the change agents gained their authority through connection power (i.e. people gain authority because of a connection with the ownership of the institution), rather than through expert power (i.e. people gain authority because of their expert knowledge; see 2.5.2.). Compared to the prestigious state institute of technology where its change agent and implementers had been well trained in the understanding of the innovation proposed and implementation, the institution under study was low-rated and its staff in charge of the innovation were not always professional. This type of power culture is likely to result in problems of under-informed change agents and implementers.

However, capacity cannot be developed without outside expertise and outside
resources. All participants need to be trained and re-trained for such a capacity to take root (1.4.3.). These data show that the MOE's delegating leadership style was ineffective in coaching those who are less competent and less informed, as in case study one. They also illustrate Handy's (1978: 2.1.) observation that the innovation located in the power culture will be badly implemented when the central power figure is under-informed. Such a problem confirms the importance of the contrast between connection power and expert power, and shows that expertise needs to include both how to embed the CALL in the curriculum and how to manage innovation, as suggested by Sergeant (1999; 1.3.3.).

6.5. Summary:
Setbacks in implementation
Unlike case study one imposed entirely top-down, the introduction of technology into the English program was initiated from both directions. It was aimed to improve English teaching with the use of computers. Both the external inspectors at the ministry level and the change agents at the institutional level adopted the double centre-periphery model coupled with a power-coercive strategy to manage change, but teachers lacked positive commitment and perceived change as irrelevant to their felt needs.

The outcomes showed that the innovation finally failed to integrate computers into the English program and did not achieve the desired goals for several reasons. At the institutional level, because change agents did not seek outside expertise in how to embed technology into the curriculum and how to manage innovation, they failed to make necessary arrangements to minimise resistance and resolve conflicts arising from the innovation process. Also, psychological barriers, power barriers, and communication barriers inhibited the implementation. Unlike case study one, the change agents operated the innovation behind the scene and they were empowered to show directive behaviour to decide the content of the innovation, but empowered
change agents without expertise were ineffective. Failure to implement innovation in a two-in-one model contributed to the setbacks, too, as in case study one. There was an attempt to implement primary innovations, but without an attempt to implement secondary innovations. The implementation of the primary innovation did not succeed, as the implementation tasks were limited to the introduction of technology, but without involving changes in teachers’ methodological skills and pedagogical values. The change agents were under-informed, and they underestimated the importance of resolving first order barriers to technology integration. The early adopter failed to resolve second order barriers to technology integration to implement second order change. The failure of the primary innovations was indeed caused by lack of support from secondary innovations. There was neither a training program coupled with a normative-re-educative change strategy that would involve change in behaviour and values, nor an effective communication mechanism that would allow direct feedback between two parties in conflicts. At the ministry level, as a result of the delegating leadership style adopted by the MOE, the change agents did not obtain adequate guidance from the MOE. All these impeding factors inhibited the development of the institutional change capacity and the innovation finally led to the non-implementation.
Chapter Seven  Case Study Three

7.1. Introduction
Unlike case study one, imposed entirely top-down, and case study two, initiated from both directions, this chapter describes an attempt to examine a bottom-up project in which teachers initiated change in materials and implemented it without involving outside experts. It also examines whether the change of materials would bring about better practice and investigates the factors affecting its success.

As in the two preceding case studies, this chapter also covers three major parts: the background to the innovation, the innovation process, and the analysis of the outcomes. The applicability of some models of change that have appeared previously will be examined again.

The data and information collected were mainly from the minutes of the English teachers' meetings, informal conversations, casual questioning, school reports, questionnaires, and other documents. Apart from the role of a participant, I was also an observer, as in the previous case studies.

7.2. Background to the innovation
The institutional policy influenced by the MOE
Unlike the two preceding case studies, this innovation was not part of the Five-Year Development Plan (FYDP) specific for achieving system transformation. However, it was influenced by the MOE. Over the past years, the MOE wanted textbooks to be decided bottom-up, rather than top-down, to introduce teacher autonomy in choosing textbooks (The School Report One 1994: 39-40). To comply with the requirements, the institution had establishes two routes of purchasing textbooks:
1. Textbooks for specialist-subject courses are selected by their teachers and purchased by students themselves.

2. Textbooks for general subject courses (like the English program) are selected by teachers, but ordered and purchased through the Teaching Affairs Office.

The current procedure by English language teachers

Based on the policy above, English language teachers customarily held an English teachers' meeting one or two weeks before the end of each semester, discussing the course books for the forthcoming semester. They submitted the list to the Teaching Affairs Office in the last week of each semester so that it could process the purchase. Current catalogues and sample books on the market place were often provided by outside importing/publishing companies so that teachers could choose from them.

The English course was a four-year program and teachers who taught the same year of students used the same textbook(s). Currently, two kinds of textbooks were in use together for every group of students from the first-year to fourth-year: a reading course book and a conversation one. The former was to enhance learners' reading comprehension, and the latter, often accompanied by a series of cassettes or videotapes, was to enhance their speaking and listening skills. In the academic year 1995, textbook A and textbook B were reading course books and textbook C and D were conversation books (see Table 7.1. below). Textbook A was written and made by local Chinese scholars, and it had been used for more than five years by the academic year 1995. Textbook B, published by a local company, was a collection of pieces from well-known English-speaking authors such as Ernest Hemingway, and had been used for two years. Textbooks C and D were imported directly from English-speaking countries and had been used for three years and two years respectively. In the second half of the academic year 1995, the teachers had to decide the book list again.
Because teachers had used those textbooks for at least two years and had found problems with them, some teachers started to consider changing them and looking for other ones. For example, the English language teachers wanted to replace textbook A because its content was dull and it contained English influenced by transfer from Chinese. Three years before, they had proposed replacing textbook A. Unfortunately, this proposal was turned down by administrator Z who was a member of the power centre, like the other two actors in the two preceding case studies (i.e. administrator X and administrator Y). Because it was her who had introduced textbook A, she exercised her power to retain textbook A. It appeared that the school authorities did not genuinely implement the policy from above.

There were 16 English teachers taking charge of the English course for each year of students who majored in five different vocational subjects (see 4.4. in Chapter Four). As noted above, 10 teachers out of 16 used the English teachers’ office (the writer was one of them) and at times shared in decisions regarding the selection of course books or other pedagogical issues.

Table 7.1. Textbooks used in the academic year 1995

<table>
<thead>
<tr>
<th></th>
<th>First year</th>
<th>Second year</th>
<th>Third year</th>
<th>Fourth year</th>
</tr>
</thead>
</table>

7.3. Major elements of the innovation

7.3.1. The innovation

This innovation was initiated by English language teachers, intending to improve teaching with better materials and introduce teacher autonomy in choosing textbooks.
7.3.2. The innovator system
As in the two preceding case studies, this bottom-up innovation was to respond to the demand from the MOE. However, this case study differed from them in that the change was not led by the school management. It was teachers who acted as internal change agents. Nevertheless, no specific person among teachers was in charge of this change because no one was organized into different levels of importance from highest to lowest. Every teacher shared equal responsibility and importance to decide on the change and to implement it. However, as we shall see, this apparently non-hierarchical and democratic arrangement did not seem to produce good results, as will be discussed in the later sections. Also, although the school authorities were not involved in the decision-making process, in practice they covertly influenced the results, as will be discussed in the later sections, too.

7.3.3. The innovating system
The school management was the adopter of the requirement from the MOE. In addition to the role of internal change agents, the teachers were also the users of the new materials as well as students. At the bottom of the pile, the students were the receivers of teachers' decisions, and their opinions were not necessarily consulted nor incorporated into teachers' decision-making. Whether students would think something quite different from teachers' will be presented in the questionnaire section below.

7.3.4. The innovation process
Between March 1996 and May 1996
Because the new textbook list needed to be submitted in the last week of the academic year, those teachers who attempted to seek a change often took the initiative to persuade others to gain their support for the replacement. Some teachers started to express opinions of dissatisfaction in some current textbooks between March and May in order to gain support from others.
In March, 1996, teacher R in the staff chats talked about changing textbook D because she felt bored after having used it for two years (Excerpt 7.2 in 'relative advantage' 7.4.2. below). In May, 1996, teacher P in the staff chats mentioned that she was thinking of changing textbook C because it was too easy (Excerpt 7.3. in 'compatibility' 7.4.2. below). Teacher N talked about changing textbook C because it had too much recycling of the previous materials and therefore was too easy for students (Excerpt 7.3. in 'compatibility' 7.4.2. below). Teacher V was considering changing textbook B because it was too difficult for her students to comprehend (Excerpt 7.3. in 'compatibility' 7.4.2.). So far, teachers’ judgement of inappropriate materials included a variety of criteria, such as ‘too difficulty’, ‘too easy’, ‘being used too long/boredom’. Therefore, those textbooks fell into a class which was highly likely to be replaced later on. Although some teachers wanted to replace some textbooks, they had different criteria for choice. For example, teacher N did not support the replacement of textbook B because she thought that it was important for course materials to serve the purpose of moral teaching and textbook B could exactly serve such a purpose.

In May, 1996

Two weeks before the academic year, the teachers started to set time aside for meetings to discuss textbook selection. One week before the meeting, every English teacher received a notice about the three pedagogical issues that were going to be discussed in the English teachers’ meeting:

1. the use of computer/language lab
2. textbook selection
3. how to raise students’ interest in English-learning
**In June 1996**

One week before the end of the academic year, the English language teachers attended the meeting held during lunch time for about 50 minutes (between 12:30 pm and 1:20 pm). During the whole meeting, most of the meeting time was spent on the first issue (see Excerpt 6.8. in 6.4.5.2.2.2. in Chapter Six). Little time was left for the discussion of textbook selection and no time was left at all for the third one. Just right before the end of the meeting, the teachers quickly decided to replace textbook A, on the replacement of which they had agreed three years before. They still perceived textbook A as inappropriate material (see 7.2. above). This time, teachers repeated this decision, but no further details regarding how to persuade administrator Z were raised, which later indicated the likely obstacles to gaining support from the top authorities and to the success of the bottom-up style of change. By the end of the meeting, whether the rest of course books would be retained was not discussed at all due to time shortage. The meeting seemed to come to an end without a clear, satisfactory conclusion.

**In June 1996**

Even though there was no resolution in this meeting, the teachers did not organize any additional arrangements for further discussion. In the last week of the academic year, I found a notice written on the board, stating the names of textbooks to be used in the next academic year. I immediately asked teacher M what had happened. She replied that an administrator from the Teaching Affairs Office came to the English teachers' office and asked for the book list on the day before. Five teachers (teachers M, N, R, O, and P) including herself were on the spot, so they together worked out the book list and wrote it down on the board. She then explained why those books were selected, retained, or replaced. I summarize these reasons in Figure 7.1. below and add the criteria to the reasons.
Figure 7.1. Decision-making for the textbooks in the academic year 1996

<table>
<thead>
<tr>
<th>Current textbooks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook A: it was decided to replace this because the content was dull and it contained English transferred from Chinese. (criterion: Chinese style English)</td>
</tr>
<tr>
<td>Textbook B: teacher N insisted on retaining textbook B because it served the purpose of moral teaching. (criterion: moral teaching)</td>
</tr>
<tr>
<td>Textbook C: textbook C was replaced because it was too easy for learners and teachers. (criterion: too easy)</td>
</tr>
<tr>
<td>Textbook D: although many teachers considered it to be appropriate and interesting for learners, it has been used for two years, so teacher N and teacher R felt bored with it and would like to look for new materials. (criterion: being used too long/boredom)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Newly-selected course books:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course book F: teacher R introduced course book F because its audio materials were interesting after she had used it in a small group of students for one year. However, teacher R also honestly admitted that some learners still fell asleep when she played those interesting tapes in class. (criterion: interesting audio materials)</td>
</tr>
<tr>
<td>Course book G: textbook G was the latest new course book, so it was introduced. (criterion: the latest)</td>
</tr>
<tr>
<td>Textbook H: because teacher O considered it to be necessary to enhance students' grammar knowledge, she chose a grammar book, course book H. In teacher O's view, learners' grammatical knowledge was too weak and conversation books (i.e. textbooks C and D) which contained more language function than language form could not make up for such a weakness. Therefore, she recommended a grammar book to enhance learners' command of language forms. (criterion: grammar teaching)</td>
</tr>
</tbody>
</table>

It was at this moment that I realized that the final decision was made without a thorough discussion by ‘all’ members. As a member of the English teaching staff, I was not the only one who learned about the book list from the board and its decision-making process through a third person. The other teachers also knew as little about the decision-making process as me. Teacher A did not know textbook D had been replaced until she was
informed by other teachers. She came into the office and looked for any opportunity to retain textbook D. She told me that she did not agree with the replacement of textbook D because she perceived it as appropriate material for her students. Furthermore, she was worried that three textbooks (one book more in the forthcoming academic year) at a time would cause a burden to the students, in terms of financial expense and learning progress. In her experience, the lesson hours (two or three hours per week, 16 weeks per academic year) would not be enough to complete even two books. All these points showed that her material criteria included economic factors and time availability, but which were not taken into account due to inadequate discussion.

At this stage, without adequate communication and discussion, the book list had been finalised by a group of five teachers. They spent one afternoon making a preliminary decision and confirmed it on the following day, just three days right before the final examination week (the end of the academic year). Despite disagreements, the remaining time (three days left) was rather inadequate for making any other better decisions, particularly at the time when every teacher started to be busy giving out their final examination papers for printing and therefore no time left for further discussion. Finally, teacher A or the other teachers who had different opinions had no choice but to endorse the final decision.

In June 1996
At the same time, administrator Z again turned down the proposal regarding the replacement of textbook A after she learned about the decision through a third party. She sent teacher C to inform teacher O about her disagreement and again intervened in the decision-making. Finally, the textbooks for the academic year 1996 were as below (Table 7.2):
### Table 7.2. Textbooks used in the academic year 1996

<table>
<thead>
<tr>
<th></th>
<th>First year</th>
<th>Second year</th>
<th>Third year</th>
<th>Fourth year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>Reading</td>
<td>A</td>
<td>--</td>
<td>B</td>
</tr>
<tr>
<td>1996</td>
<td>Grammar</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
</tbody>
</table>

The above is the description of the field events to illustrate how teachers implemented the innovation. In sum, the new materials were finalized without teachers being convinced of their merits or considering them to be more appropriate than the current textbooks. Under such circumstances, it is very likely that teachers would find more problems with the new materials after they started to use them, which would undermine the success of this teacher-initiated change and cast a doubt on the value of teachers' contributions. Apart from the doubts on the appropriateness of newly-selected materials and on the effectiveness of the teacher-initiated change, the outcomes influenced by the people in power also showed that teacher ownership had not been genuinely and successfully established. In general, this teacher-initiated change failed to achieve the goals as intended.

#### 7.3.5. Questionnaire data

In this case study, I would like to add another data section - data collected from students. As mentioned earlier, the students were at the bottom of the pile and they were the receivers of teachers’ decisions because their opinions were not systematically collected and incorporated into the decision-making. Hence, it is likely that students would think something quite different from teachers’. Fortunately, I had administered two types of questionnaires to students in March 1995 and June 1995 respectively (see the detail in 3.5.3.3.).
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(1) The questionnaires of the first type
The questionnaires of the first type were to investigate the teachers' classroom behaviour while they were using textbook C that contained communicative components. I wanted to get a picture of how far the current classroom practice conformed to communicative principles. Since classroom observation was impossible in the institutional culture (see 3.5.3.3.), I administered the questionnaires to two groups of students each week for four consecutive weeks. Students' perceptions might be presenting teachers' practice. Each group had 7 students and they were taught by two different English teachers, group A by teacher R and group B by teacher L. Because the questionnaires were not administered in class, the response rate was well below 100%. Two groups of students were given the open-ended questions regarding the teaching content and the teaching procedure, etc. One example of each group is presented below.
Example of the questionnaires of the first type (Group A)

(1)

• Student name: S(a)
• Date: March 7, 1995; period time: 1, 2 (afternoon)

• Please describe the teaching content in detail:

p.63. Drill practice on the board
The teacher wrote up the sentence model on the board:

[If + present tense (do or does), will + Verb].
Students were required to give the answer using the same model.
e.g. If we [do not get] to work on time, the boss [will be] very angry!

Will + V, If + present tense (do or does)
The first person
The second person + do (or not)
The third person + does (or not)
The third person (plurals)

A: Do you think the bus will be late today?
B: I hope not. If the bus is late today, we won't get to work on time.
And if we don't get to work on time, the boss will be very angry!
A: You are right. I hope the bus isn't late today.

pp. 64-65. The teacher read the sentences in English, then translated them into Chinese.

p.66. The teacher read the sentence model, and then worked on one example of drill practice. After that, we were asked to do the rest of drill practice.

Supplementary materials: first class, business class, economy class.
Supplementary materials: auto repair shop

• Please describe the teaching procedure in detail:

p.63. Some students were asked to write the answers of the drill practice on the board in the front of the whole class.

p.65-p.65 The teacher read the English sentences, explained the vocabulary in Chinese, then translated the sentences into Chinese. She also asked students to translate sentences into Chinese.

p.66. The teacher read the model sentence and analysed the model in Chinese. Then, she worked on one example of drill practice. Then, she asked students to complete the answers of the rest of drill practice at home.

If + past sentence (were) ------, they'd + V. (If-clause is used when contradictory to the present fact.)
The learning attitude of my classmates near me:

Some classmates paid attention to the teacher, but some were chatting, and some were reading their own novel.

My own learning attitude:

I did not concentrate very much, but I tried to write down everything that I did not know.

Example of the questionnaires of the first type (Group B)

(1)

- Name: S(b)
- Date: March 9, 1995; period time: 2 (morning)
- Textbook: textbook C, pages 36-39

Please describe the teaching content in detail:

Reading:
(a). Rosemary Smith was robbed.
(b). A "SURPRISE' QUIZ
   e.g. (a) What was he wearing?
   She doesn't remember what he was wearing.
   (b) When did the Civil War end?
   He isn't sure when the Civil War ended.

Conversation:
Do you know if honey is bad for my teeth?

The key vocabulary: e.g. details, civil war, whether.

Please describe the teaching procedure in detail:

1. The students repeated after the teacher.
2. The teacher translated sentences into Chinese.
3. The teacher wrote up the most important vocabulary or grammar on the board to draw our attention.

The learning attitude of my classmates near me:

It was quiet in general. One student talked in class, but the teacher stopped this student from talking.

My own learning attitude:

I listened carefully to the teacher and did what she told me to do in class (e.g. repeating after the teacher, writing, etc.) I also wrote down everything which the teacher emphasised.
According to the results of the questionnaires, I summarize the ways in which students perceived teacher R and teacher L as performing their classroom practice, and categorise them into 10 points as below, including what those exactly entailed:

1. Dialogue practice: repeating fixed dialogues in pairs or in chorus. Teachers asked their students to repeat after them.
2. Drill practice (on the board): repeating single sentences (e.g. "if- clauses" in S(a) in Group A/teaching content) to get students familiarised with the highlighted sentence models using the board in class.
3. Drill practice (for homework): requiring students to complete the rest of drill practice on the textbook at home to get them familiarised with highlighted sentence models.
4. Translation into Chinese: translating sentences into Chinese for students’ comprehension.
5. Grammar explanation: analysing grammatical units in English sentences, using Chinese as a medium, to understand the structure of language.
6. Correction: providing feedback (in Chinese) on student performance (e.g. drill practice on the board)
7. Listening to cassettes: the teacher played fixed sentences recorded in cassette to the whole class, and the students were required to listen carefully.
8. Learners as passive receivers of subject matter: student-talk did not seem to be encouraged. The class was quiet most of the time. Sometimes, students were stopped from talking in class.
9. Teacher-dominated method: Teacher-talk was at the centre throughout the lesson. Teachers also provided the model and controlled direction and pace.
10. Textbook-driven: the teaching content mostly followed the sequence of the textbook. Supplementary materials were sometime provided, the
content of which were limited to new vocabulary and mostly related to students' daily life. No task-based materials were introduced.

Based on the results of the questionnaires, it seemed that the teaching procedures of both teachers closely resembled each other, involving extensive use of drill practice, the provision of sentence models, and the controlling of direction and pace, etc. Teachers adopted Chinese translation for students' comprehension. The two teachers' teaching contents also followed the sequence of textbook C so that it became textbook-driven. The only difference between the two was that teacher L was not found to play the accompanying cassette in class when using textbook C, but teacher R did it once. Two tables were presented below (Table 7.3. and Table 7.4.) to show their teaching procedures as perceived by their students, in terms of activities, the role of learners, the role of teachers, and the role of materials.
Table 7.3.

1. Activities

<table>
<thead>
<tr>
<th>Teacher R in group A</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dialogue practice</td>
</tr>
<tr>
<td>• Translation into Chinese</td>
</tr>
<tr>
<td>• Grammar explanation</td>
</tr>
<tr>
<td>• Drill practice (on the board)</td>
</tr>
<tr>
<td>• Drill practice (for homework)</td>
</tr>
<tr>
<td>• Correction</td>
</tr>
<tr>
<td>• Listening to cassettes</td>
</tr>
</tbody>
</table>

2. Role of learners

<table>
<thead>
<tr>
<th>Students in group A</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Learners as passive receivers of</td>
</tr>
<tr>
<td>subject matter</td>
</tr>
</tbody>
</table>

3. Role of teachers

<table>
<thead>
<tr>
<th>Teacher R in group A</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Teacher-dominated method</td>
</tr>
</tbody>
</table>

4. Role of materials

<table>
<thead>
<tr>
<th>Textbook C in group A</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Textbook-driven</td>
</tr>
</tbody>
</table>
Table 7.4.

1. Activities

Teacher L in group B
- Dialogue practice
- Translation into Chinese
- Grammar explanation
- Drill practice (on the board)
- Drill practice (for homework)
- Correction

2. Role of learners

Students in group B
- Learners as passive receivers of subject matter

3. Role of teachers

Teacher L in group B
- Teacher-dominated method

4. Role of materials

Textbook C in group B
- Textbook-driven
(2) The questionnaires of the second type
The questionnaires of the second type were to elicit learners' opinions on the current textbooks in use. In fact, teachers not only had different criteria for choice, but also had or could have different judgements as to what materials were like. When there were differences among teachers, learners' opinions would help resolve the differences. As a participant as well as observer, I was personally interested in the teachers' debate on the issue of textbook B and textbook C. Some teachers regarded textbook B as too difficult for the students, but some thought that it could present life-encouraging articles to students and serve the educational purpose of moral teaching. Some teachers regarded the vocabulary in textbook C as too easy, but some did not agree because not all students could easily manage the functional forms presented in textbook C (see the detail in 7.4.3.1.2. below).

I administered the questionnaires to the students who were using textbook B and textbook C to learn about their attitude towards these books. Because the questionnaires were administered in class, the response rate was near 100%. Most questions were open-ended and some of the questions were as follows (see the detail in Appendix 3-3).

1. What made you like textbook B?
2. What made you dislike textbook B?
3. Do you think textbook B should continue to be in use? Why?
4. What made you like textbook C?
5. What made you dislike textbook C?
6. Do you think textbook C should continue to be in use? Why?

The results showed that 49 students out of 151 (32%) considered that textbook B should be retained. Among these 49 students, 3 learners expressed that textbook B should be retained because they had suffered from this book, so it would be fair if new students would suffer as much as they
had. The other 46 students expressed that textbook B should be retained because its grammar unit and vocabulary unit were very helpful for those learners who were planning to attend entrance examinations leading to higher education in the future. These examinations often contain a lot of grammar components. As two students wrote,

S1: textbook B should be retained because we can learn a lot of complex grammar in preparation for examinations after school-leaving.

S2: textbook B should be retained because it contained more phases and more vocabulary items than the conversation book, from which the learners will learn more. This is good for the future examinations.

Another two students explained the reasons for retaining textbook B, which happened to echo the moral education claimed by teacher N (7.3.4. above). As they said,

S3: the articles are more meaningful and deeper than the conversation book, which is helpful for our future.

S4: textbook B contained a wide variety of topics, and its articles are meaningful, which is good for learning.

By contrast, 91 students out of 151 (60%) argued that textbook B should be replaced. Most students said that they disliked this book because it was extremely difficult for them to comprehend, the vocabulary was extremely difficult to memorize, and its articles were not related to the daily use. As one student wrote,

S5: textbook B should not be retained because we should learn practical English for daily use, e.g. English for travelling, rather than English with long vocabulary and complex sentences.
One student used the Chinese word ‘痛苦’ (painful) to describe her experience using textbook B,

S6: textbook B should not be used again because its articles are too complex to comprehend, but the lesson hours are too few. Its vocabulary is too long to remember. It was a ‘painful’ experience using this book.

Another student used the Chinese word ‘恶梦’ (nightmare) to describe his experience using textbook B,

S7: Textbook B was a ‘nightmare’ to me. There were about 40-50 vocabulary items in one lesson, and I had to prepare two lessons for the mid-term and final examination each. How could I finish these? Besides, I had to learn grammar first in order to understand the sentence. I was very bored with it.

Another student expressed how his confidence had been destroyed by textbook B:

S8: if you want to recover your confidence, you should burn off textbook B!

Regarding textbook C, 129 students out of 151 (85%) expressed that they liked textbook C because its articles were easy to comprehend and its topics were interesting and relevant to the daily use. As some students wrote,

S1: The vocabulary items in textbook C are fewer and more related to our daily life. Its grammar is less complex. And its illustrations are colourful, which motivates learners. This book will be useful just in case we go abroad.

S2: The vocabulary in textbook C is practical and easy to remember. Its sentence model provides basic grammar knowledge. This book should be retained because it will increase learners’ confidence in learning English.
S4: textbook C should be retained because it provides basic grammar, which makes learners willing to learn.

S5: the vocabulary items in textbook C are easy to learn and its grammar is graded appropriately, from not difficulty to medium difficulty. The illustrations motivate us, too. Therefore, this book should be retained.

Although most students supported textbook C because it was easier and more relevant to the daily use, there was one student commenting that textbook C should be replaced because it did not represent a challenge. As she wrote,

S3: textbook C provides basic grammar, but it was too easy for a challenge. Therefore, it should be replaced.

The results of the questionnaires of the second type suggest that there were different views of the textbooks between teachers and students. Textbook B, was perceived by most students as difficult, and they commented that it should be replaced, whereas some teachers (e.g. teacher N) perceived it as good for moral teaching and finally decided to continue using it. Textbook C was regarded favourable by most students, and they commented that it should be retained, whereas some teachers (e.g. teacher P) perceived it as inappropriate and finally replaced it.

7.4. Analysing the outcomes
7.4.1. Model of innovation
On the one hand, this teacher-initiated change had characteristics of the double centre-periphery model of change, as in the two preceding case studies. On the other hand, this innovation was not a typical double centre-periphery change process, as will be discussed in 7.4.1.2. below.
7.4.1.1. The first layer of the double centre-periphery model
As in the two preceding case studies, the curriculum developers from the MOE acted as external inspectors. They adopted the delegating leadership style in which they did not closely monitor the performance of the school management and teachers. Their change strategy remained power-coercive to make the management comply with the national policy. If it were reported that the school management intervened in textbook selection to gain improper profit, there would be sanctions for it.

7.4.1.2. The second layer of the double centre-periphery model
As mentioned earlier, this innovation was not a typical double centre-periphery change process. This was because the management did not lead the change (7.2.). It was teachers who decided the content of the change and how far it would go. What we had here was a potential for the process that resembled certain characteristics of the problem-solving model in which the eventual users identify the need for change and diagnose how they want to solve the problems by gathering the information and selecting appropriate criteria, then follow a process of adaptation, trial, and evaluation (Havelock 1971; Markee 1997). However, it is noted that students remained as the passive receivers and they were not consulted about their opinions for decision-making, as in case study two.

7.4.1.3. Change strategy
Although this teacher-initiated change was not a project led by the school management, the actual decision was only superficially bottom-up. The way the school authority treated it went against the bottom-up procedure when it influenced the outcomes through its power and coercion. It seemed that the double centre-periphery process created a context for a problem-solving model, but its change process did not in practice conform to the problem-solving model.
On the other hand, the teachers introduced new materials, but they did not seek outside expertise by establishing a teacher program coupled with a normative-re-educative change strategy to enhance their skills and clarify their role behaviour. However, teachers' conversation showed that this was not what they expected of the materials (see Excerpts 7.1, 7.2, 7.3 in 7.4.2 below; also see Figure 7.1 in 7.3.4. above). As in case study two, what was currently done was simply replaced without engaging users in deep change in attitudes, values, and skills, so we cannot expect any larger curriculum development would take place from the mere change of materials, as will be discussed in 7.4.3.1.1 below.

7.4.2. Attributes of the innovation
People are likely to resist change because it often involves a lot of workload and time. However, there were several attributes that increased the teachers' willingness to initiate this change and its potential for success, although we will see later they were inadequate to overcome some problems.

1. Relative advantage
There were two perceived relative advantages of introducing new materials. First, because teachers were not native speakers and English is a foreign language in Taiwan, they perceived the change of teaching materials as an opportunity for their own language improvement (Excerpt 7.1. below). They could learn additional language usage from new materials. Secondly, with the change of textbooks, they could get rid of previously taught materials with which they had felt bored (Excerpt 7.2.).
Excerpt 7.1.

(Casual questioning: teacher M and P were asked the reasons for changing materials)
Teacher M: Students always think I know everything. But, I do not really know everything. Learning from new course books is the most convenient way to improve my language.

Teacher P: I do not like to teach the same materials. Indeed we teachers improve our English using new materials.

Excerpt 7.2.

(Casual questioning: teacher R was asked the reason for replacing textbook D)
Teacher R: I hope we can replace textbook D because I am bored using the same textbook for two years.

2. Compatibility
The English teachers discovered some weakness of the current textbooks after having used them for at least two years. For example, some teachers thought that textbook C was too easy for learners and textbook B was too difficult (Excerpt 7.3. below; also see March '96 in 7.3.4. above). Therefore, they would like to look for new materials that were more compatible with the learners' English level. However, teachers did not adopt a systematic criterion for material evaluation, which unfortunately led to subjectivity. I will discuss this problem in 7.4.3.1.2 below.
Excerpt 7.3.

(Informal conversation)

Teacher P: I would like to change textbook C because it is too easy. There are only 10 new words at most in each unit. This will not improve my students' English. It will not improve my English, either.

Teacher N: I wonder if I can replace textbook C. I have taught it this semester and I found that it was not difficult and repeated what was in the previous volumes.

Teacher V: The articles in textbook B are too difficult for our students, in terms of many new words and complex sentence structure. Our teaching hours are not enough for explaining these new words and complex sentences. I hope we can change this into the one that is appropriate for the level of our students.

3. Observability

Due to the recent improvement in each new generation of published course books, new course books with interesting stories and colourful illustrations seem to look more appealing to teachers than old ones. According to the data between 1992 and 1995 (Table 7.5. below), the teachers in the past had changed some of the textbooks twice respectively in the academic years 1993 and 1994. Therefore, the results of the change had been visible to them.
Table 7.5. Textbooks used from the academic year 1992 onwards

<table>
<thead>
<tr>
<th></th>
<th>First year</th>
<th>Second year</th>
<th>Third year</th>
<th>Fourth year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>Reading</td>
<td>A (book 1)</td>
<td>A (book 2)</td>
<td>B</td>
</tr>
</tbody>
</table>

4. Trialability
In the teachers’ past experience, they had tried out new materials in an incremental way. If teachers found new materials inappropriate, they were free to replace them in the following semester. Therefore, the flexibility of trialability made them willing to initiate the change. This was completely different from case study one in which there was no turning back for teachers if they chose to quit their job to study abroad. It also differed from case study two in which teachers were forced to accept computers before they were confident of using them.

5. Complexity
In fact, successful innovation via materials is a complex process, but the teachers failed to realize the complexity of the innovation issues (see 7.4.3.1.1. and 7.4.3.1.2. below). Besides, evaluating and selecting appropriate materials is emphatically professional and requires additional
energy and time from teachers to consider several issues, but many teachers hold the attitude that material selection only needs little time and energy and they fail to perceive its complexity. The following events showed that most teachers in this case study shared the same attitude as well.

(a) Lack of the agreed course aim or objectives
Cunningsworth (1984) has suggested general principles for selecting appropriate materials, and the first two principles are to relate materials to the course aim and objectives and to keep students' learning needs in mind. It is essential for teachers to determine the aim of the course and the teaching objectives that will lead to the outcomes as intended. The aim and objectives of a teaching program should determine the course materials to be used and not vice-versa (ibid.) However, this is not the case in this study. Because the English course is a required subject in Taiwan, English learning has long been treated as subject matter, rather than as a skill for real communication. As long as the student could satisfy each individual teacher's requirements that might differ among teachers, s/he could get the credits needed for graduation. Over the past years, there was no agreed course aim or agreed objectives from which teachers could generate criteria for material selection.

(b) Failure to keep learners' needs in mind
Moreover, keeping students' learning needs in mind, as Cunningsworth (1984) describes, contains two components. One is generally about grading learning units, and the other is about whether the course books can interest or involve the students. Therefore, to keep learners' needs in mind requires learners' opinions. However, it requires additional time and energy from teachers to elicit students' opinions by means of questionnaires or surveys, etc. The debate on textbook B showed that the teacher (teacher N) judged it as appropriate because it served the purpose of moral teaching (May'96 in 7.3.4. above), but she seemed to largely neglect the issue of whether the
learners could relate new language to what they already knew and build up their knowledge of English by adding new learning units to their existing body of knowledge. To resolve the debate, teachers should have spent energy collecting information that they needed to formulate to evaluate whether the language content was steep, average, or shallow. In other words, if the decision-making process was going to run smoothly to resolve the debate, teachers needed more information (e.g. students' opinions), discussion and agreement on criteria (e.g. course aims), and some way of insuring intersubjective agreement on judgements, which suggested that more opportunities needed to be arranged for thorough discussions in order to resolve differences. However, as we saw, teachers bypassed these steps and went straight to the final decision. Learners were the passive receivers of the teachers' decision in this bottom-up style of change. The results of the questionnaires of the first type above showed that 60% of students found textbook B too hard to comprehend and demotivating, and wished to discontinue its use, which indicates the problem of the 'comprehensible input' (Krashen 1982). That is, the learner will encounter a larger difficulty in comprehension and is likely to be demotivated if materials are beyond his/her English level too much. Therefore, we may expect that such a problem would recur in incoming learners. Failure to perceive the complexity of material evaluation exemplified most teachers' attitude that material selection just needed to take little time and energy.

Unlike the two preceding case studies, the attributes of this innovation indicate that the change process encountered no resistance because teachers perceived several relative advantages and a high level of compatibility, trialability, and observability from it. A low level of complexity perceived by teachers also made them willing to change to new materials. On the other hand, as mentioned earlier, the change process did not really conform to the problem-solving process. Failure to replace textbook A also indicates the failure of increasing teacher ownership. Our main concern is whether
teachers would solve their felt pedagogical problems collaboratively and improve teaching by selecting something else. What factors were the main causes of the failure to bring about the larger process of innovation? To answer these questions, I will again study the applicability of a two-in-one innovation model to this case study in the following sections.

7.4.3. Two-in-one innovations
7.4.3.1. Primary innovations
Two features of the process, i.e. teachers' professional performance and teachers' professional knowledge, were identified as the main causes of the failure under primary innovations to conform to a problem-solving process and bring about larger curriculum innovation. Two theories from the literature, i.e. innovation triangle, and knowing-in-action and reflection, will be adopted to investigate the failure of the primary innovations, in terms of the development of materials, the development of skills, and the development of values.

7.4.3.1.1. Innovation triangle
Textbooks as change agents have been highly valued by Torres and Hutchinson (1994; see 1.2.4.1.). However, according to the students' questionnaires (see above), the teachers had not reflected on the method implied by the textbook. I will discuss this issue with reference to the notion of the innovation triangle proposed by Markee (1997; see 1.3.2.). In 1.3.2, I have presented the notion of the innovation triangle that materials, methodological skills, and values form an innovation triangle (see Figure 1.2. in 1.3.2.). Because the relationship between belief and behaviour is reciprocal, trying new practices sometimes will lead to questioning one's underlying beliefs. Examining one's beliefs can lead to attempting new behaviour. When these changes take place, teachers are likely to implement the methodological principles and the roles of teachers and learners that are reflected in new materials.
In this case study, when textbook C was introduced, it indeed should have brought in new practices, i.e. the CLT approach to English teaching, in which activities are embedded in negotiation of meaning and interaction by sharing information or seeking students’ judgement, the role of learners is inter-actors, the role of teachers is facilitators of the communication process, and the primary role of materials is to promote communicative language use through tasks, etc. (see Table 1.2. in 1.2.4.). The results of the questionnaires of the first type suggested that over the past years the teachers had not been showing a clear understanding of the methodological principles of CLT or what was expected of them in their new role during the period of using textbook C. When two teachers in group A and group B were using textbook C, their teaching resembled traditional teaching (TT) in terms of activity, the role of learners, the role of teachers, and the role of materials (see Table 7.3. and Table 7.4. above). The students’ perceptions suggested that the lessons were largely teacher-centred, the students were treated as passive receivers of subject matter, and the teaching contents were textbook-driven. For the purpose of comparison, I include the major components of CLT to illustrate the contrast between the two different approaches (see Table 7.6. below). Table 7.6. shows that although the two teachers had been using textbook C for more than three years, the students’ perceptions suggest that most lessons still largely involved a mixture of structural and grammar-translation techniques, which did not really conform to the underlying principles of CLT. Therefore, the evidence from the questionnaires of the first type illustrates the problem occurring in many classrooms where the teachers simply use new materials without altering role behaviour, so the materials do not serve the purpose for which they were developed (Fullan 1991; De Lano et al. 1994).

These data so far suggested that teachers changed to new materials, but their values and skills remained the same as before. They limited the primary
innovations to the development of materials, but without an attempt to
develop new skills and values. We can expect that teachers would simply
carry out traditional teaching in the way they used to do with textbook C
while using course book F and G, which also contained communicative
components like textbook C. It is unlikely that any significant change in
teachers' classroom behaviour and students' learning outcomes would be
produced using new course books F or G. Thus, if the teachers are not
aware of the innovation triangle and never attempt to involve changes in
skills and values, we cannot expect that 'materials development can serve as
a convenient entry point into the larger process of curricular innovation'
(Markee 1997: 54). This case study was an example to illustrate the failure
of the innovation triangle, and confirms Markee's observation that the
problem in most teaching contexts is that teachers' classroom behaviour
often remains the same and accordingly learners' learning outcomes will not
involve any significant change.

It was also an example to illustrate the failure of most innovations due to
their failure to implement second order change (see 1.3.2.), as in case study
two. Teachers only replaced the current materials, i.e. first-order change,
but without seeking new goals, without substantially altering the way that
teachers and students performed their roles. As the Chinese saying goes,
'the ingredients change, but the soup remains the same.' It is clear that the
mere change of teaching materials does not necessarily lead to a significant
change. Fullan indicates that 'We are beginning to get a sense that the
challenge of reform is not simply to master the implementation of single
innovations' (1991: 29). Nowadays the challenges 'will be to deal with
more second-order change' (ibid.). Any larger innovation will be unlikely
to take place, as innovation needs to involve significant changes in
conceptions and role behaviour (Fullan 1991: 41; Lano et al. 1994). Only
when the new materials involve changes in teachers' role behaviour for what
they are developed, will textbooks serve as effective change agents, as
claimed by Torres and Hutchinson (1994).
Table 7.6. Comparison of teachers' performance (TT and CLT)

1. Activity

<table>
<thead>
<tr>
<th>TT</th>
<th>CLT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teachers in group A and group B:</strong></td>
<td>• Negotiation of meaning and interaction (seek students' judgement and asking for justification)</td>
</tr>
<tr>
<td>• Dialogue practice</td>
<td>• Information-sharing (asking for real world information or soliciting students' opinions)</td>
</tr>
<tr>
<td>• Translation into Chinese</td>
<td>• Student-initiation (posing problem-solving questions)</td>
</tr>
<tr>
<td>• Grammar explanation</td>
<td></td>
</tr>
<tr>
<td>• Drill practice (on the board)</td>
<td></td>
</tr>
<tr>
<td>• Drill practice (for homework)</td>
<td></td>
</tr>
<tr>
<td>• Correction (providing feedback on student's performance)</td>
<td></td>
</tr>
<tr>
<td>• Listening to cassettes (teacher R only)</td>
<td></td>
</tr>
</tbody>
</table>

2. Role of learners

<table>
<thead>
<tr>
<th>TT</th>
<th>CLT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Students in group A and group B:</strong></td>
<td>• Learners as negotiator, inter-actor, giving as well as taking.</td>
</tr>
<tr>
<td>• Learners as passive receivers of subject matter</td>
<td></td>
</tr>
</tbody>
</table>

3. Role of teachers

<table>
<thead>
<tr>
<th>TT</th>
<th>CLT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teachers in group A and group B:</strong></td>
<td>• Facilitator of the communication process</td>
</tr>
<tr>
<td>• Teacher-dominated method, providing model and controlling direction and pace.</td>
<td>• Needs analyst</td>
</tr>
<tr>
<td></td>
<td>• Counsellor</td>
</tr>
<tr>
<td></td>
<td>• Process manager</td>
</tr>
</tbody>
</table>

4. Role of materials

<table>
<thead>
<tr>
<th>TT</th>
<th>CLT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Textbook C in group A and group B:</strong></td>
<td>• Task based or authentic materials.</td>
</tr>
<tr>
<td>• Textbook-driven</td>
<td></td>
</tr>
</tbody>
</table>
7.4.3.1.2. Knowing-in-action and reflection

Failure to develop skills and values was indeed caused by lack of the development of the experiential knowledge. In Chapter One, I have presented two phenomena, i.e. knowing-in-action and reflection, defined by Wallace (1991), which make up the experiential knowledge of a practitioner teacher (see 1.4.1.1 and 1.4.1.2.). A practitioner teacher will develop his or her knowing-in-action by practice of the profession. Apart from the tacit knowledge of knowing-in-action, it is essential for a practitioner teacher to reflect critically on that knowing-in-action by asking herself/himself what went wrong or what went well. Through structured reflection, s/he is able to understand what is going on in class and explore the real causes of effective or ineffective teaching. S/he has to avoid the causes of ineffective teaching, or change the ideas about what constitutes good teaching and repeat them.

At the institution under study, all English language teachers had been working for 3 years at least and some even for more than 10 years (4.4.3.5.). It seemed that English language teachers had developed knowing-in-action by practice in their profession, but they also tended to judge the current textbooks, based on such tacit knowledge alone. Teacher P was a typical example to illustrate a practitioner teacher who owned knowing-in-action, but lacked reflection (Excerpt 7.4. below). First, teacher P did not reflect critically on her practice of profession through self-enquiry. When she considered replacing textbook C because its vocabulary was too easy, she did not seem to put the question to herself whether the vocabulary items were easy for her students or just for herself. It is likely that what has been judged as ‘too easy to learn’ by teachers actually matches the learners’ level and is in fact appropriate materials. As illustrated earlier by the results of the questionnaires of the second type, some students (e.g. S2 and S5) supported textbook C partly because its vocabulary items were ‘easy to remember’ (S2) and ‘easy to learn’ (S5). These students’ perceptions
differed from teacher P's, but they were not carefully studied and incorporated into decision-making. Then, after teacher P was challenged by her colleagues, she started to give a more specific reason that textbook C was easy because there were only 10 new vocabulary items at most in each unit. However, she could not explain adequately why '10' new vocabulary items, rather than 9 or 11 vocabulary items, etc., were inappropriate. Neither did she provide the details of recycling. All this showed that her dissatisfactions were expressed in terms of impression or feeling and finally led to subjective impression.

Secondly, it seemed that teacher P limited her criterion to 'teaching of new vocabulary', but her reason was not adequately stated using the conscious application of principles. When teachers select materials, as Cunningsworth (1984) describes, they need to consider the principle that learners not only need to acquire a good working knowledge of vocabulary, but also have to learn about useful functions of English and grammar so that they could relate them to the functional forms. However, teacher P did not demonstrate her professional judgement on the consideration of the relationship between language, i.e. the balance among the vocabulary, the language form and language function. She did not put the question to herself whether her students had been able to manage the functional forms provided in textbook C. She also did not collect data to examine whether her students could manage to describe an event or situation that might happen, might be happening, or might have happened using 'if-clauses' provided in textbook C (book 4), or whether her students could relate their knowledge of vocabulary to such a functional form. Because teacher P failed to reflect critically on her practice of the profession using the conscious application of principles, either generated from her own systematically-collected data or taken from the literature, she seemed to leave her feelings of dissatisfaction unexplored (Excerpt 7.4. below).
Excerpt 7.4.

(Casual questioning: I asked teacher P why she proposed replacing textbook C).

Teacher P: I would like to change textbook C because it is too easy.

The writer: What makes you think it is too easy. (I use textbook C like teacher P)

Teacher P: There are not many new words. There are only 10 words at most in each unit. This will not improve my English. It cannot improve my students' English, either.

Teacher M (she also uses textbook C and she overheard our conversation): I do not think so. My students are not able to understand IF-clauses.

Teacher P: But IF-clauses are not difficult.

The writer: Some of my students could not pronounce several words, e.g. 'vacuum'.

Teacher P: I think 'vacuum' and some other words, e.g. 'south pole' and 'north pole', are not difficult words to remember. These words are commonly used.

Teacher M (smiling): Probably your students' English level is higher than mine.

(Teacher P did not respond any more.)

The other teachers' attitudes and behaviour were similar to teacher P's. For example, when teacher R introduced course book F for its 'interesting' audio materials, she had discovered the problem that her students did not appreciate those materials as much as she did and many felt bored and fell asleep in class (see Figure 7.1 in 7.3.4. above). However, she and the other teachers failed to evaluate the method underlying course book F using principles, such as those suggested by Richards and Rodgers (1986):
What aspects of language proficiency does the method address?

What kind of learners is the method most effective?

Is the method most effective with elementary, intermediate, or advanced learners?

What kind of training is required of teachers?

Under what circumstances does the method work best?

There was no discussion among teachers about what kind of activity design is required of teachers, rather than simply playing tapes in class, to sustain learners' interest and prevent them from sleeping. Such pedagogical issues were therefore left to individual teachers. In general, during the process while the teachers were seeking new materials, they did not demonstrate their professional judgement by evaluating the method underlying course book F or G. Because teachers did not have a complete understanding of the underlying method, they could not explore the methodological skills necessary to carry out the new role reflected in those materials that they had chosen. If consciousness and structures had been appropriate, the teachers would have evaluated the underlying method to explore the new teacher role behaviour and methodological skills before they put new materials into practice. They would have critically reflected on their professional performance by any means, such as keeping the writing of reflection (e.g. a diary or journal) or collecting students' opinions, to investigate why the existing materials went wrong or went right. Unfortunately, all information seemed to be reliant on subjective impression (e.g. 'too difficult', 'being used too long', etc). As we shall see, this was a consequence of the lack of structured reflection by teachers, in addition to the lack of the agreed course aim as discussed earlier. Without a critical analysis of practice, teachers failed to diagnose carefully 'how' they wanted to solve the problems. Thus, lack of critical reflection by teachers was found to be a major problem that made the change process unprincipled and unreflective and made the implementation of the primary innovations unsuccessful.
Teachers' lack of critical reflection has been examined in case study one where the teachers encountered difficulties in teacher research. This case study offered further evidence as to the teachers' unreflective attitude towards teaching. Roberts' (1999) research showed that not all practitioner teachers are predisposed towards a critical analysis of practice. The results of our study confirm her study. Indeed, many experienced teachers have developed knowing-in-action by practice of the profession, but such tacit knowledge, though necessary, is insufficient to solve pedagogical problems and inspire teacher development (1.4.1.2.). It is extremely important that teachers also needed to develop reflection capability to gain the experiential knowledge as a whole so that they are able to generate a critical analysis of practice from which they seek appropriate solutions to ineffective teaching as discovered in class and explore the new value of what constitutes good teaching.

7.4.3.2. Secondary innovations
7.4.3.2.1. Teacher training
As in the previous case studies, the failure of the primary innovations was a consequence of lack of secondary innovations.

Teacher training coupled with a normative-re-educative change strategy was non-existent. Because of the delegating leadership style, the MOE did not require a teacher program on developing materials, skills, and values. This undermined the success of teacher-initiated change, and highlights the importance of teaching training. Nowadays many teacher development projects reported in the literature focus on teacher training by engaging teachers in a variety of problem-solving situation. As noted above (see 7.4.1.3.), this bottom-up style of change created a potential for the problem-solving model within a double centre-periphery model, but it did not in practice conform to the typical problem-solving model because it was not
coupled with a normative-re-educative strategy to attempt changes in teachers' methodological skills, values, and behaviour. Although the teachers' role has changed from a simple transmitter of subject matter to a change agent, a bottom-up style of change will not necessarily lead to innovation when teachers are not better informed and better trained. Innovation is emphatically professional, so teachers require teacher development programs on a continuous basis, as in the previous case studies.

Apart from the impeding factors surrounding teachers' knowledge and performance, now I am going to look at the institutional-structural context that was unhealthy for effective communication and also caused several barriers to the bottom-up style of change.

7.4.3.2.2. Communication mechanisms
The organization type largely affects the way of communication. Many private schools in Taiwan are owner-managed schools whose organization types are characterized by a power culture, as mentioned in case study one and two. In these three case studies, it was apparent that administrators X, Y, and Z had the central power so that they had strong influence on the innovation management and eventually affected the outcomes. Besides, the relationship in a private-enterprise institution between the teachers and the people in power is like a boss-subordinate type of roles. We saw that even the principal in case study one had to finally withdraw his policy in favour of teachers' overseas study, and the English language teachers in case study two could not be involved in decision-making. Once more in this case study the English language teachers could not replace the materials that they perceived as bad. Teachers were inclined to perceive themselves as a passive receiver in relation to the central power. When asked about their reactions to administrator Z's rejection of the replacement of textbook A (Excerpt 7.5. below), several teachers expressed their disappointment.
Excerpt 7.5

(Casual questioning)
Teacher O: sometimes it is not a matter of not using the books appointed by the authority, but it is a matter that the authorities felt their power was hurt. It may cause troubles to the teachers who always disobey.

Teacher A: there is no need to teach so hard!

Teacher P: We are only employees!

All this posed huge obstacles to effective communication and inhibited the success of the innovation. Because of the hidden power culture, the English language teachers did not attempt any form of communication with Administrator Z to persuade her. Administrator Z learned about the replacement from a third party. Similarly, she avoided a direct communication channel by sending a third party to inform teacher O (one of the English language teachers) of the rejection. Because there was no direct, effective communication between the teachers and the management throughout the change process, participants at all levels could not resolve differences, as in the two previous case studies. As a result of the communication barrier, teachers failed to gain support from the authorities.

In addition to communication barriers, there were other barriers that also inhibited the success of the bottom-up style of change. Psychological barriers and power barriers made the power centre covertly resist a bottom-up change and subvert the national plan. The new value of teacher autonomy was likely to cause conflicts to the existing value of the school authorities that had had full control over textbook selection over the past years. Because of the value barrier, the authorities did not genuinely comply with the national policy to foster teacher ownership of material choice. Besides, any change will more or less cause psychological impacts
on the part of adopters. The idea of teacher autonomy provoked some kind of threat to the power base of the authorities. The authorities might think that teacher ownership would challenge their existing power and made their ultimate control decline. Administrator Z might perceive it as a sign of a threat to her power base if the teachers decided to replace textbook A that she had recommended before.

So far, as a result of the communication barriers and other barriers, this bottom-up innovation did not gain support from the people in power. It appeared that teachers did not make any attempt to resolve those barriers by creating the conditions of acceptance. However, Tomlinson (1990) in his research shows that if a bottom-up style of change is to succeed, it needs to gain support from 'the powers that be'. Hurst (1983) has proposed several conditions of acceptance that will persuade the others to accept the change. The first three conditions of acceptance are communication, effectiveness, and desirability. Therefore, a bottom-up style of change will be more likely to gain support from 'the powers that be' when teachers attempt to make them perceive the 'effectiveness' and 'desirability' of the change through any form of communication.

Effectiveness and desirability
There were likely reasons why administrator Z insisted on using textbook A. First, this might be because textbook A was written by the local scholars and its publishing company had lots of experience and was well-known in the local market place, whereas, the other books were written by western authors and published by overseas companies with which administrator Z might not be familiar. Secondly, administrator Z was not aware of the weakness of textbook A because she was not a practitioner teacher. In the past, the teachers' impressionistic opinions of textbook A, such as its dull content, did not seem to be convincing to persuade her. Under such circumstances, if the teachers could have provided an oral report as well as a written report in
the light of the learners' unsatisfactory performance as a result of the use of textbook A, this could have helped administrator Z identify problems and perceive this change as desirable. If the teachers could have tried out some other new replacements in a small group of students and proved that the new materials were more effective in bringing about better performance than textbook A, administrator Z would be likely to be convinced of their value. In addition, market forces (see 2.2.1. and 5.4.1.1.) might have also worked, if teachers had been able to present 'customer' (i.e. student) preferences by eliciting information from students in a written form. Because of competitive pressure, the school authorities would have been more willing to change their mind when they realized that their policy did not satisfy the students. When the authorities did not want to lose their students to their competitors, teachers would have more chance to persuade them and win their support. In a power culture, it is perhaps useful to offer the authorities 'expert advice' as above and help them perceive the change as desirable and effective. Although it was uncertain whether administrator Z would accept the teachers' proposal, some efforts should have been made to minimize the resistance from the people in power by creating the conditions for acceptance, as suggested by Hurst.

7.4.3.2.3. Institutional rhythms
In this case study, it is necessary to investigate the institutional rhythms under the secondary innovations because they also play a key role in affecting the success of this teacher-initiated change at the macro level.

The way of organizing meetings to resolve differences revealed certain institutional 'rhythms'. Teachers' meetings provided good opportunities for all teachers to resolve their daily pedagogical issues together. The way teachers organized meetings reveals their 'rhythm' (see 1.4.2.). The meeting of June was intended to resolve differences among all parties and achieve a consensus regarding the course books to be used in the
forthcoming semester. It was held one week before the end of the academic year in the same meeting as case study two (see Excerpt 6.8. in 6.4.5.2.2.2.) One week before the meeting, teachers received the written notice. During this period, new course books, such as course books F, G, and H were not passed around all parties. Neither were any memos circulated to all parties to collect their opinions on the current textbooks or on new course books. Then, the time for the meeting was almost used up in the discussion of the computer lab (see case study two). No adequate time was left to discuss material selection. Around 5 minutes before the end of the meeting, some teachers had to leave the meeting for their afternoon lessons, and teachers started to bring up the issue of material selection. Teachers quickly resumed a consensus on the replacement of textbook A on which they had agreed three years before. When the bell rang, some teachers left the meeting, but there was no announcement of additional meetings to be held to finalize the book list.

The way teachers attempted to reach a consensus by means of meetings did not seem to create favourable conditions for facilitating communication and thereby failed to facilitate innovation. First, one week before the end of the academic year was not a good timing and right stage while teachers started to be busy with giving examination papers and marking. When differences among teachers were postponed till this relatively late stage, time would be too inadequate for thorough discussion, which resulted in a hasty decision. Secondly, before the meeting teachers were not officially asked to collect any necessary information and bring it along for discussion, so they were inclined to rely on subjective impression as a result of lack of the general system of analysis (see "complexity" in 7.4.2. and 7.4.3.1.2. above). Thirdly, there were various criteria among teachers on appropriate materials. As mentioned earlier (‘complexity’ in 7.4.2), if the decision-making process was going to run smoothly to resolve the debate, teachers needed more information (e.g. students’ opinion), discussion and agreement on criteria (e.g.
course aims), and some way of insuring intersubjective agreement on 
judgements. This suggested that more opportunities needed to be arranged 
for thorough discussions in order to resolve differences because one-off 
meetings was inadequate to produce effective communication. However, no 
such effort had been made by teachers. Consequently, the new materials 
were finalized, but not every teacher was persuaded of their merits. This 
type of local rhythm to organize meetings to resolve teachers' daily 
pedagogical issues did not seem to facilitate the understanding of the 
problems and help seek appropriate solutions, which apparently inhibited 
innovation (see Table 7.7. below).

In 1.4.2., we have pointed out the likely existence of local rhythms in every 
organization and discussed the way of how to deal with them. It seems that 
every institution has its own way to organize meetings for resolving 
differences, such a local rhythm should be appreciated and allowed to take 
the lead of the project. The type of rhythm (e.g. the way of organizing 
meetings) discovered by Holliday (1995) in a black South African institution 
would facilitate innovation, which is what I call 'positive local rhythms'. 
However, the analysis above shows that the 'rhythm' by which teachers 
organize meetings did not facilitate them in problem-solving and effect 
innovation at all. Therefore, one cannot assume that all rhythms are helpful. 
In this study, the local rhythm to organize meetings was found to inhibit 
innovation, which is what I call 'negative local rhythms'. Negative local 
rhythms should not be appreciated and allowed to take the lead of the project. 
The finding derived from this case study highlights the importance of taking 
otice of local rhythms (1.4.2.). We cannot understand the way teachers go 
about their daily tasks without reference to the local rhythms. Thus, it is 
important to identify what local rhythms are and differentiate positive 
rhythms from negative ones, so we are able to get the project adopted locally 
by allowing the former to take the lead of the project or to minimize the 
impeding factors by rectifying the latter.
Table 7.7. Institutional rhythms

<table>
<thead>
<tr>
<th>Organizing a meeting to resolve differences</th>
<th>Reasons why this point does not facilitate innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Despite various perceptions of or criteria for appropriate materials during teachers' chats, the meeting was held one week before the end of the academic year during lunch time (around 50 minutes).</td>
<td>One week before the end of the academic year was not a good timing and right stage while teachers were starting to be busy with giving examination papers and marking.</td>
</tr>
<tr>
<td>One week before the meeting, teachers received the written notice. New course books, e.g. course books F, G, and H were not passed around all parties. No memos were circulated to teachers to collect their opinions on the current textbooks or on new course books.</td>
<td>Teachers were not officially asked to collect any necessary information and bring it along into the meeting for discussion. They were inclined to rely on subjective impression as a result of lack of the general system of analysis.</td>
</tr>
<tr>
<td>50 minutes were almost used up in the discussion of the computer lab (see case study two). Time was apparently inadequate for the discussion of material selection.</td>
<td>Effective communication could not be achieved through one-off meetings.</td>
</tr>
<tr>
<td>Around 5 minutes before the end of the meeting, some teachers had to leave the meeting for their afternoon lessons. Teachers started to bring up the issue of material selection. Teachers quickly resumed a consensus on the replacement of textbook A. When the bell rang, some teachers left the meeting, but there was no announcement of additional meetings to be held to finalize the rest of books.</td>
<td>Differences among teachers were postponed till the end of the academic year, which was inadequate for thorough discussion and would result in a hasty decision.</td>
</tr>
</tbody>
</table>
7.5. Summary
Setbacks in implementation
This case study differed from the two preceding case studies in three aspects. First, although it also responded to the demand from the MOE, unlike the two preceding case studies, this teacher-initiated change was not a project led by the school management, but by English language teachers who acted as internal change agents. Secondly, it was not part of the FYDP specific for system transformation. Thirdly, teachers supported the change, as they perceived a high level of relative advantages, compatibility, observability, and trialability, but a low level of complexity from it. This bottom-up innovation was intended to improve teaching by better materials and also introduce teacher autonomy in choosing textbooks.

The outcomes showed that this project failed to achieve the goals as intended for several reasons. At the institutional level, teachers had changed to new materials, but their skills and values remained the same as before. Therefore, we cannot expect that there would be any significant change in teachers' classroom performance and learners' outcomes when they failed to implement the second order change and the innovation triangle. This failure of the primary innovations was also caused by lack of the secondary innovations, as in the previous case studies. Lack of a teacher training mechanism coupled with a normative-re-educative change strategy to develop teachers' performance and knowledge and involve them in changes led to the failure of the primary innovations. The analysis revealed that teachers' performance resembled traditional teaching when they actually used materials that contained communicative components. They did not have a complete understanding of the principles underlying the materials and explore new skills and values. They had developed knowing-in-action, but without developing the reflection capability. However, without development of the experiential knowledge as a whole, teachers could not generate a critical analysis of practice from which they could seek
appropriate solutions to ineffective teaching discovered in class. Therefore, this case study highlights the importance of teacher training and teacher development. When we gradually recognize the value of teachers' contributions to educational innovations, under-informed teachers will be unable to act as effective internal change agents.

Besides, this case study is an example to illustrate that bottom-up innovations will not succeed if the authorities do not genuinely support it. However, lack of full support from above was not the only impeding factor for the success of innovation. Communication barriers, value barriers, psychological barriers, and power barriers that were associated with the institutional culture finally inhibited the success of the innovation. The outcomes show that the way the school authority treated the change went against the bottom-up process when it influenced the outcomes through its power and coercion. Consequently, teacher ownership was not successfully fostered.

Moreover, this case study suggests that we cannot understand why the innovation did not succeed without reference to its local rhythm surrounding teachers. The rhythm reflected by the way teachers organized their meetings to resolve their differences showed that it was ineffective in facilitating innovation, which is what I call 'negative local rhythm' and different from the positive one as discovered by Holliday (1995). It is suggested that change agents should be able to differentiate the positive local rhythms from the negative ones, so we are able to get the project adopted locally by allowing the former to take the lead of the project or to minimize the impeding factors by rectifying the latter.

At the ministry level, the MOE intended to increase the value of teacher ownership, but it did not closely monitor the adopters' performances, including the school management and teachers. Because of the delegating
leadership style, the MOE did not require teacher training for the development of skills and the development of values. Consequently, although the double centre-periphery model created a context for problem-solving, its change strategy remained power-coercive and its unreflective and unprincipled change process failed to conform to the problem-solving process. All these impeding factors contributed to the setbacks of the innovation, as in the previous case studies.
Chapter Eight  Conclusions and implications

8.1. Conclusions
As a whole, the examination showed that because there were several negative forces against innovation, little innovation took place from the three cases studied, one initiated entirely top-down, one from both directions, and the other bottom-up.

The ethnographic method was adopted to record the actual emic experience of the participants and to try to recast it, in terms of the categories and systems of theories abstracted from previous experience of innovation. It is only by reinterpreting the local events in this way that we can use the large body of research that exists to understand the problems that arose from the innovation process. Since the participants did not in fact perceive their experience in these terms, the ethnographic data presented the most undisturbed data and have value in revealing some concepts that are apparently absent from the participants' conceptual world during the innovation process and raising them to consciousness. In contrast with the ethnographic study conducted by Barmada (1994) who acted as an internal change and had applied outside expertise into the innovation process to make it succeed, this research throws up useful insights through a worm's-eye-view observation, and shows that everyday and banal malfunctions are also analysable in the terms of the innovation literature.

This study, on the one hand, supports the view that top-down innovations will be unlikely to produce significant innovation not only in the western countries, but also in Taiwan, a Chinese context. It confirms that the greatest value in bottom-up innovations is that they are more acceptable to 'bottom' participants (i.e. teachers) than top-down innovations. On the other hand, this study did not provide evidence, as assumed in the Introduction, that success in bottom-up innovations is more likely when implementers feel that they are implementing what they own. Instead, it
calls for caution towards this assumption, and suggests that there are other equally important factors impeding the success of bottom-up innovations. It is naïve to assume that getting support from ‘the powers that be’ is the only key to the success of bottom-up innovations. This study reveals that other factors that inhibit the success of top-down innovations are also found to be responsible for the failure of bottom-up innovations. Both top-down and bottom-up innovations require the same favourable conditions to facilitate their success.

In general, this research confirms the accuracy and relevance of the models put forward by several researchers. However, it also calls some of their assumptions into question and suggests additions to the conceptual systems they suggest. It is hoped that the insights derived from teachers' understanding of innovation can provide valuable insights for the implementation of innovation in the field of ELT in other contexts sharing similar characteristics. It is also hoped that the understanding of innovation implemented by its internal change agents without involving outside experts will facilitate the knowledge of what has been neglected in the past and what should be done in the future by innovators or teacher trainers. At the same time, the implications arising from this research can be fed into the content of in-service teachers' education programs and innovation projects.

8.1.1. Innovation and context
The outcomes show that the choice - largely an unconscious one - of innovation models, change strategies, and leadership styles was closely related to the organization culture. Such interrelating interactions among one another not only support White's notion of 'innovation and context' (1988) in which 'organization culture, innovation strategy and models of innovation will probably be interrelated' (ibid:137; see 2.1. and 2.2.), but also confirm Markee's conclusion (1997) that 'innovation is highly context-sensitive and context-specific'. Four context-specific features were
identified.

\textit{a) The double centre-periphery innovation model}

The analysis shows that the innovations were implemented in a double centre-periphery model coupled with a delegating leadership style by the central ministry. As a result of marketisation in education, the MOE adopted a delegating leadership style and simply demanded innovation from the central office, without helping its periphery, some of whom had limited knowledge of innovation and were less competent in developing their capacity to innovate. As in the centre-periphery model, the central ministry in the double centre-periphery model still took control of the power to promote educational reforms, but the responsibility for the implementation tasks, such as decision-making, resource-seeking, and problem-solving, was placed with the local 'school board'. The power-coercive change strategy typically used in this model did push people to act differently, but such a strategy is not only ineffective in many English-speaking countries (Chin and Benne 1976), but also in Taiwan, a Chinese-speaking context, as it also requires a high level of control and monitoring (see 2.2. and Figure 2.2.). However, because the delegating leadership style is characteristic of a low level of supportive behaviour and a low level of directive behaviour, those less competent institutions, like the institution under study, were left helpless to work on the innovation on their own. The outcomes showed that they were incapable of carrying out the larger process of curriculum development without outside help. Thus, the double centre-periphery model with a delegating leadership style is ineffective in successful innovation, at least to those inexperienced and less competent. But maybe the double centre-periphery model, a sort of market model, means that the MOE does not consider it necessary to maintain those institutions that do not make the grade, as it holds the attitude that the innovating institutions survive, but non-innovating institutions close.
b) Hidden power structure
The ethnographic data revealed the existence of a hidden power structure that operated behind the scene throughout the innovation process. This finding supports Kennedy and Kennedy's (1998) observation about 'the hidden culture', and illustrates the different effect that power sources may bring forth between 'connection power' and 'expert power' (see 2.5.2.). Because the people in power gained their power through connection power, rather than expert power, the ineffective outcomes presented in the study exemplified the likely problem of power cultures indicated by Handy (1978), i.e. when the ability of the central figure is weak, the organization is weak, too (see 2.1.1.). The ineffective leadership in such a hidden power structure not only caused communication barriers in both top-down and bottom-up innovations, but also added complications to the process of a bottom-up style of innovation, as seen in our three case studies. This study shows that the identification of the hidden cultures is crucial to an understanding of why an organization implemented change in one way, rather than another. It confirms that in some situations the hidden culture is actually at work, and shows that its influential impact on the implementation of innovation cannot be neglected.

c) Positive local rhythms vs. negative local rhythms
The specific practices of the institution were well revealed by the ethnographic data, and the finding of which corresponds to Holliday's (1995) observation about 'local rhythms' –the ways in which the people inside go about their daily tasks. The type of local rhythm, which will surely facilitate innovation, is what I call 'positive local rhythms' and should be valued and allowed to take the lead of the project, as suggested by Holliday. However, Holliday's notion of local rhythms does not necessarily work in the sense Holliday intended. In contrast to positive local rhythms, another rhythm was found in the study. Such a type of rhythm did not provide favourable conditions to facilitate innovation, which is what I call 'negative
local rhythms' and has not been identified by Holliday yet. In case study three, the rhythm reflected by the way in which teachers organized their regular meetings to go about their tasks was not effective in facilitating innovation. The way of organizing meetings to deal with teachers' pedagogical problems proved to be useless in resolving conflicts of concerns among participants and eventually posed obstacles to the innovation process. Therefore, local rhythms are not to be appreciated unless they are positive. The essence of local rhythms is that they are unconscious, part of the commonsense environment accepted by the people inside the institution. However, because local rhythms crucially affect the implementation of innovation, this study shows that it is necessary to raise the unconscious acceptance of them to consciousness. Also, once the negative and positive local rhythms have been raised to consciousness, one must conclude that not all local rhythms should be appreciated and allowed to take the lead of the project.

d) Kennedy's six sub-systems – and one more

These ethnographic data showed that there were several sub-systems of the system that inhibited innovation from taking place. This finding supports Kennedy's wheel diagram (1988; see 1.3.1.) in which classroom innovation is always constrained by its macro factors, in terms of institutional, educational, administrative, political, and cultural. For instance, because the institution under study was not language-oriented, but business-orientated, it was inclined to dedicate more efforts into its specialized subjects, rather than into a general subject course, such as the English program. The data show that teachers often felt powerless and helpless, and we can see that this derives from constraint by macro factors. As a result of the institutional constraints, English language teachers were completely left helpless. At the wider educational level, the MOE did not create favourable conditions for English language teachers, in terms of easy access to research training that was necessary for implementation. Again, teachers were left helpless. At
the administrative level, as mentioned earlier, the MOE did not consider the
difference of change capacity between prestigious schools and middle-low
rated schools, and failed to develop capacity for those less competent and
inexperienced. Consequently, innovation was constrained by the problems
arising from the institutional, educational, and administrative levels.

Nevertheless, this study shows that it is necessary to add economic factors to
Kennedy's sub-systems of a system because they may also significantly
influence the administration, education, and institutions. Because Taiwan is
a technology-business oriented country, more research resources have gone
to these fields to develop her economy, which has led to an unequal
allocation of resources in different fields of education. The difficulties
English language teachers were confronted with, as mentioned earlier, are
indeed caused by the economic structure of the society. All this illustrates
that the economic structure of a country does affect the implementation
issues at institutional, educational structure, and administrative levels.
Thus, Kennedy's wheel diagram could be adapted as classroom innovation is
fundamentally influenced by the institutional, educational, administrative,
economic, political, and cultural levels that form progressively wider circles.

8.1.2. Dalin's four barriers – and one more
Another set of patterns which impeded progress were Dalin's four barriers to
innovation effectiveness (1978; Dalin et al 1993; see 2.5.). Value barriers
were identified as the impeding factors for successful implementation in case
studies one and three; power barriers in case studies two and three;
psychological barriers in case studies one, two, and three; practical barriers in
case study one. It was not easy to examine whether the participants at both
ends were aware of these barriers, and wanted to resolve them to facilitate
adoption and implementation. As far as the data revealed, the request by
end users (i.e. English language teachers) for more research resources in case
study one showed that they were aware of the practical barriers, and had
attempted to minimise them. However, even after being informed, the management (the change agents and 'the powers that be') did not take any action or show any interest in resolving them. Therefore, this study was not a case in which the innovation failed simply because the participants were unaware of certain barriers and failed to resolve them. Instead, the management was aware of the practical barriers, but it seemed to have a careless attitude towards the English program and its teachers, which finally led to a minimal degree of implementation.

Moreover, it is necessary to add another item to this set of barriers – the communication barrier (see 2.5.4), as it was found to be one of the structural problems. All information was transmitted through a third party between the parties involved. As a result of the communication barrier, teachers could not obtain a clear framework of innovation (case studies one and two), and the people in power were not convinced of the teachers' decision on replacing textbook A (case study three). It seemed that both parties were aware of the communication barriers, when the change agents in case study two received no response from teachers regarding the purchase of CD ROM materials or when teachers wondered if the computer/language lab would be used. The thing was that 'the powers that be' were aware of the communication barriers, but tended to adopt an avoidance strategy to postpone conflicts, in the hope that they would go away. The study shows that regardless of top-down or bottom-up innovations, an indirect communication mechanism will seriously block the interaction between all parties involved and become the fatal cause of non-implementation. Dalin's four barriers are inadequate to address the barriers to innovation effectiveness, the communication barriers have to be considered as well.

8.1.3. Single innovation vs. two-in-one innovations

Markee's (1997) concept of 'two-in-one innovations' was of great use in interpreting the ethnographic data. Rather than viewing innovations as
mere 'primary innovations', this research study also examined innovation from the aspect of secondary innovations. Two dimensions of secondary innovations were identified as the structural problems that inhibited organizational development. As mentioned in 8.1.2, the absence of an effective, directive communication mechanism was one of the structural problems. The absence of a teacher training mechanism was found to be the other structural problem. Without a teacher training mechanism, teachers were not provided with necessary skills and knowledge to better implement innovation. Failure to implement secondary innovations to enable primary innovations indicated that the change agents did not seem to have the notion of change as organizational development, and indeed no such notion turned up in the ethnographic data. Many people tend to implement innovation simply from the aspect of single innovations, but the outcomes proved that single innovations are insufficient to bring about the large process of curriculum development. This suggests that Morrison's 'change as organizational development' (1998; also see 1.4.3.) is not just trendy words, but something really necessary.

8.1.4. Capacity-building
Another concept absent from the participants' conceptual world was lack of developing the 'institutional capacity to innovate' (Huberman 1992), which was identified as the main cause of the failure to implement innovation in both top-down innovations and bottom-up innovations. Bennett and O'Brien (1994) have claimed that a learning organization in industry is not only an organization that is changing, but also an organization that is developing and enhancing its capacity to change (1.4.3.). The research study shows that the development of the institutional capacity to innovate is also necessary in education and ELT, which supports Fullan's emphasis on 'capacity building' (1992: 56). Two dimensions were identified as the impeding factors for such capacity to take root.
a) Under-informed internal change agents

Although some researchers criticize innovations led or managed by outside experts, the study shows that the value of internal change agents will be undermined if they are not equipped with adequate outside expertise. There were three different groups of internal change agents in the three case studies, but their ineffective leadership was predominately caused by lack of outside expertise. The change agents in case study one were the administrators, e.g. the principal; in case study two, the people in power; in case study three, the teachers. The holders of greatest power in the institutional structure were the people in power in case study two, but the holders of least power were the English language teachers in case study three. The principal in case study one stood in between. However, the outcomes showed that no matter which power position the change agents stood, the three cases failed to achieve the large process of curriculum development, as they lacked outside expertise in how to implement innovation effectively. The three innovations, both top-town and bottom-up, were implemented without involving outside experts, and these change agents lacked the insight to take several responsibilities as indicated by Gross et al. (1971; see 1.2.1.), such as failure to plan, support and monitor the innovation process, to provide access to training for the new role, or to devise feedback mechanism, etc. These gave solid evidence to support Havelock and Huberman’s (1977) conclusion that the low degree of success of educational innovations mainly stems from the failure of the innovators to seek outside expertise and make use of the extensive theoretical literature on innovation. Many people tend to be critical of outside experts setting up innovations, but our study shows that under-informed internal change agents are as ineffective.

b) Under-informed teacher ownership

The study highlights the importance of teacher ownership in both the top-down and the bottom-up styles of innovation. As illustrated in case study two, teachers turned out to be more sympathetic to the use of
computers when they expected the lab could be modified as their request. As illustrated in case study three, teachers were willing to initiate change that they could decide the content and how far it would go.

However, the study also indicates that teacher ownership does not necessarily lead to the successful implementation even in bottom-up projects in which teachers were supposed to be given more teacher ownership than top-down. As seen in case study three, the double centre-periphery model had created an opportunity to foster teacher ownership and created a potential for problem-solving, but the reason for its failure was predominately caused by teachers' unprincipled and unreflective attitude towards teaching and material selection. The teachers were unable to adopt the perspective of a problem-solving process, and failed to conform to the problem-solving model. The outcomes showed that a bottom-up style of innovation by less-informed and less reflective teachers would undermine the value of the problem-solving model. The study highlights the importance of teacher development, and shows that when contributions from teachers have gradually become a worldwide concept, teacher ownership should mean 'informed teacher ownership'. Teacher ownership is a useful concept, but ownership is ineffective without expertise in all contexts, whether top-down or bottom-up innovations.

8.1.5. Two orders of change

Our ethnographic data were well explained by Cuban's (1988) two categories of change: first order change and second order change (see 1.3.2.). Rather than examining innovation from the aspect of 'first order change' only, the research study also looked at 'second order change'. No evidence from case study three showed that teachers had changed their skills and values, with the use of new materials over the past years, in terms of activities, the role of learners, the role of teachers, and the role of materials (see Table 7.6 in 7.4.3.1.1), and their conversation showed that this was not what they
expected of the materials (see Excerpts 7.1, 7.2, 7.3. in 7.4.2.; also see Figure 7.1. in 7.3.4.). Teachers' practice did not conform to the communicative principle while they were using the textbooks that contained communicative components. All this echoes Karavas-Doukas' (1995) conclusion that teachers will not gradually understand the underlying approaches of new materials and change their behaviour by using them, and illustrates the problem of the 'innovation triangle' (Markee 1997: 54; see Figure 1.2. in 1.3.2.), i.e. changes at one point of the innovation triangle is not accompanied by changes at other points of the triangle. The study supports Cuban's emphasis on the importance of second order change, and confirms that it cannot be expected that the large process of curriculum development will take place through mere first order change, without an attempt to implement second order change. Nevertheless, the study also suggests that too much emphasis on second order change may lead to some problem in the process of technology integration, as discussed below.

8.1.6. Two orders of barriers

The ethnographic data are also well explained by Brickner's two orders of barriers to technology integration (1995). As illustrated in case study two, the change agents attempted to produce first order change by introducing computers, but their failure to provide English language teachers with adequate and compatible hardware and software caused first order barriers to technology integration. On a higher level, as in case study three, the early adopter failed to implement second order change without engaging himself in the use of new activities or new role behaviours and without producing changes in beliefs, which caused second order barriers to technology integration. This study suggests that technology does not necessarily bring about significant change in classroom practice when implementers changed in content, but not in methodology. So far, Cuban's two orders of change and Brickner's two orders of barriers all stress the importance of second order change. However, the tendency in the literature to emphasize second
order change may draw most attention to second order barriers, and underestimate the importance of resolving first order barriers. It may not be right to think that first order barriers are always easy to resolve when they are supported by institutional barriers, such as lack of professional change agents or lack of budgets, as illustrated in the outcomes. Thus, this study also calls for attention to first order barriers, and suggests that such barriers should be treated as equally important as second order barriers.
8.2. Implication:
This study generally highlights the value of awareness of the conceptual tools available in the innovation literature. The outcomes showed that these conceptual tools, such as capacity-building, attributes of innovations, and the concept of two-in-one innovations, are essential to the success of both top-down and bottom-up innovations. Inexperienced change agents need to be aware of these concepts and apply them to their own innovations to make them succeed. Drawing upon the results of the study, there are some implications.

First, because the adopters' behaviour was affected by the attributes of innovation, it is necessary for change agents to study the attributes carefully and make necessary arrangements to resolve or minimise a variety of barriers. Although it is inevitable that resistance will be encountered in the early stages of innovation, the creation of conditions that are favourable for implementation is essential to success.

Secondly, success seems more likely when innovation is implemented in a two-in-one innovation model. However, to increase the likelihood of success in a two-in-one innovation model, it is necessary to develop the institutional change capacity. Therefore, it is necessary to seek outside expertise and outside resources to make the implementers better-informed, so that such a capacity can take root.

Thirdly, a point related to the above, the importance of the change capacity suggests the need for a high level of supportive behaviour from the MOE. However, the double centre-periphery model was ineffective in providing adequate support and helping the under-informed change agents and implementers towards success. Although, as a result of the impact of marketisation, the MOE may not want to maintain those institutions that cannot make the grade, the idea underlying education is not exactly the same
as commercial products on the marketplace. The value-system of marketisation on education is still a debate among many educationalists. Education needs to consider that the highly rated schools tend to take the brightest students, but less bright students often go to middle-low rated schools (like the institution under study). The study showed that the double centre-periphery model coupled with a delegating leadership style would lead to the outcome that only the strong survive, but with little help to the under-informed institutions and less bright students. Thus, it may be too early for the MOE to adopt a delegating leadership style before supporting resources necessary for the implementation are in place. Perhaps, it is still necessary for the MOE to show a high level of supportive behaviour in the early stages of innovation to take capacity-building into account. It is also necessary to diagnose the problem of unequal allocation of supporting resources in different fields of education, and attempt to support the teachers with fewer outside resources, rather than leaving them helpless. After most supporting resources are in place, the MOE can change to the delegating leadership style.

Fourthly, although this study shows that it is naïve to consider full support from ‘the powers that be’ as the only key to the success of bottom-up innovations, bottom-up innovations will surely fail without support from above. The outcomes in case study three showed that there might have been a chance for the teachers to get full support from ‘the powers that be’ if they could have taken some action to persuade them of the change. In reality, it is not easy for the people in power to accept a bottom-up innovation when they perceive it as a threat to their power base or when they have anxiety about it, etc. Getting a bottom-up innovation accepted by the people in power is not an easy task. Therefore, efforts to minimize the likely resistance from the people in power and increase the likelihood of a bottom-up style of change become essential. Hurst’s (1983) seven conditions of acceptance are proposed to be useful for persuading the people
in power and gaining their support. The first three conditions of acceptance have been related to our ethnographic data in case study three. I discuss them in more detail as below.

Communication: in the real world, people tend to hold on to power, and it is common that 'the powers that be' will resist change initiated bottom-up. Therefore, teachers need to devise a multi-communication channel, including informal conversations, meetings, written reports, with 'the powers that be' to minimize their likely power barriers and psychological barriers.

Desirability: teachers can provide concrete evidence to make 'the powers that be' perceive the proposed change as desirable, to persuade them into commitment. For instance, collection of dissatisfaction with the existing policy from the students or their parents is a powerful method to make them perceive the desirability of the change.

Effectiveness: it is also necessary for teachers to prove to 'the powers that be' that their proposed change is more effective than the existing one. This will help them perceive the change as effective, rather than as change for nothing. There are several ways of proving the proposed change to be more effective. One way is to try out the change on a small scale, then present the favourable result to 'the powers that be' so that they will be convinced of the effectiveness of the change.

In addition to the above, teachers also need to attempt to make the people in power perceive the change as feasible, efficient, trialable, and adaptable. It is important that any efforts that will create the conditions for acceptance are worth trying, as suggested by Hurst.

Fifthly, the research study also highlights the importance of INSET programs, and suggests two areas of teacher training: received knowledge and
experiential knowledge (Wallace 1991; see 1.4.1). It is necessary to provide teachers with 'received knowledge' at all times to make them better informed. It is thought that when teachers are always informed of the current theory of and skills in teaching and learning, they will gradually get familiarised with them and become able to cope with the changing role and changing practice without too much impact, in terms of value barriers or psychological barriers, etc. In addition, teachers need to develop their 'experiential knowledge': reflection and knowing-in-action. As illustrated in the outcomes, teachers were unable to reflect critically on their professional action, and thereby could not generate new ideas about what constitutes good teaching and make a change. As Wallace (1998: 16) indicates, teachers have to reflect on what they have discovered and apply it to their professional action. They have to understand their classroom problems through self-inquiry, and in this way 'identify and understand their personal theories – a change in practice may emerge from a change in these theories' (Roberts 1999: 103).

8.3. Limitation of the study
Since this research was carried out in a private-enterprise institution, the results might not be representative for those at state institutions. It seems that most people in this country prefer to work at national institutions due to their sound personnel structure, career benefits, and teaching facilities, etc. For this reason, I think their culture would not be the same as private ones. Accordingly, different mechanisms affecting innovation may arise. Therefore, it is not appropriate to perceive the findings of this research study as a national culture, as they cannot represent what is happening in state institutions. It is important for us to avoid a risk of interpreting an institutional culture as a national culture, and vice versa, as suggested by Kennedy and Kennedy (1998: 459).
The Appendix

Appendix 3-1: A copy of the schedule in the CALL seminar on December 11, 1995.
Multi-media English Language Teaching seminar (English version)
Sponsor: the division of technological and vocational education, the Minister of Education

Hosting institution: Kaohsiung State Institute of Technology (Taiwan)

<table>
<thead>
<tr>
<th>Time</th>
<th>Contents</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30-09:00</td>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td>09:00-09:20</td>
<td>Speech by representatives from the MOE</td>
<td>How I become involved in CALL: A Glimpse of CALL teacher education</td>
</tr>
<tr>
<td>09:00-09:30</td>
<td>Interval</td>
<td>EFL learning and teaching in the era of internet</td>
</tr>
<tr>
<td>09:20-11:00</td>
<td>Modern technology and English language teaching (1) (by lecture)</td>
<td>The infusion of CALL into EFL lessons</td>
</tr>
<tr>
<td>11:00-11:00</td>
<td>Interval</td>
<td></td>
</tr>
<tr>
<td>11:20-12:10</td>
<td>Modern technology and English language teaching (2) (by lecture)</td>
<td>The evaluation on the use of CALL English internet</td>
</tr>
<tr>
<td>12:10-13:30</td>
<td>Lunch</td>
<td>Enhancing English communicative abilities through computer assisted multimedia and hypermedia</td>
</tr>
<tr>
<td>13:30-15:00</td>
<td>Workshop</td>
<td></td>
</tr>
<tr>
<td>15:00-15:20</td>
<td>Interval</td>
<td></td>
</tr>
<tr>
<td>15:20-16:50</td>
<td>The planning and implementation of CALL (by lecture)</td>
<td>The planning of multi-media English teaching and the evaluation on software materials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instructional design in the implementation of CALL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The designing of teaching English writing using computers</td>
</tr>
</tbody>
</table>
Appendix 3-2: The questionnaire of the first type (Chinese version)

姓名 _______ 日期_______ (从3月6日至4月1日共4週)

** 請在 A4 的白纸上寫下英文課日誌

** 務必注明上課頁數 課本名稱

** 請詳細敘述上課所教內容

** 請詳細敘述上課方法

** 其他鄰座同學的上課態度

** 我自己的上課態度

** 觀察心得與建議
The questionnaire of the first type (English version)

Name ___________________ Date ____________ (from March 6th to April 1st, four consecutive weeks)

** Please indicate the date and period (e.g. March 2nd, periods 1 and 2 in the afternoon)

** Please indicate the page numbers and the title of textbook. (textbook C, textbook B or other supplementary materials)

** Please write down in details the teaching content in this lesson(s). (the role of materials)

** Please describe in details the teaching procedure in this lesson(s). (the role of learners (1), the role of teachers, and the role of activities)

** Please state the learning attitude of your classmate(s) near you. (the role of learners (2))

** Please state your own learning attitude. (the role of learners (3))

** Please state the results of your observation and make suggestions regarding better teaching/learning. (for further references by the researcher)
Appendix 3-3 : The questionnaire of the second type (Chinese version)

從你(妳)上[textbook B]的經驗中，你(妳)對這本書的評價是：

喜歡的理由：

<table>
<thead>
<tr>
<th>單字</th>
<th>文法</th>
</tr>
</thead>
<tbody>
<tr>
<td>文章內容</td>
<td>上課方式</td>
</tr>
<tr>
<td>成績</td>
<td>其它理由</td>
</tr>
</tbody>
</table>

討厭的理由：

<table>
<thead>
<tr>
<th>單字</th>
<th>文法</th>
</tr>
</thead>
<tbody>
<tr>
<td>文章內容</td>
<td>上課方式</td>
</tr>
<tr>
<td>成績</td>
<td>其它理由</td>
</tr>
</tbody>
</table>

沒意見的理由：

你(妳)認爲應該繼續使用此教材嗎？理由是：

從你(妳)上 [textbook C] 的經驗中，你(妳)對這本書的評價是：

喜歡的理由：

<table>
<thead>
<tr>
<th>單字</th>
<th>文法</th>
</tr>
</thead>
<tbody>
<tr>
<td>文章內容</td>
<td>上課方式</td>
</tr>
<tr>
<td>成績</td>
<td>其它理由</td>
</tr>
</tbody>
</table>

討厭的理由：

<table>
<thead>
<tr>
<th>單字</th>
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<tbody>
<tr>
<td>文章內容</td>
<td>上課方式</td>
</tr>
<tr>
<td>成績</td>
<td>其它理由</td>
</tr>
</tbody>
</table>

沒意見的理由：

你(妳)認爲應該繼續使用此教材嗎？理由是：
The questionnaire of the second type (English version)

**Your opinions on textbook B:**

What made you like textbook B?
- vocabulary:
- article:
- examination score you got:
- grammar:
- teaching procedure:
- other reasons:

What made you dislike textbook B?
- vocabulary:
- Article:
- examination score you got:
- grammar:
- teaching procedure:
- other reasons:

If you do not have any opinions on textbook B, please tell why?

Do you think textbook B should continue to be in use?
Why?

**Your opinions on textbook C:**

What made you like textbook C?
- vocabulary:
- article:
- examination score you got:
- grammar:
- teaching procedure:
- other reasons:

What made you dislike textbook C?
- vocabulary:
- Article:
- examination score you got:
- grammar:
- teaching procedure:
- other reasons:

If you do not have any opinions on textbook C, please tell why?

Do you think textbook C should continue to be in use?
Why?
Appendix 5-1: A list of journals and books on ELT, provided by librarian A, the library of the institution under study, on March 2, 96.

Analyzing Modern American English
American English and Literature
Chung-Chun-Tun’s analysis of English
Life
Let’s speak English
Time
Studio English Classroom
Studio English digest
Appendix 6-1: The minutes of the CALL workshop, noted down by the writer as the workshop proceeded on December 11, 1995.

The English language teachers from the host institution held a 90-minute workshop between 1:30 pm and 3:00 pm, demonstrating the use of hardware and software.

Step one:
The speaker was the change agent from Kaohsiung state institute of technology, Taiwan. She was one of the English teachers at this state institution and worked together with the other four teachers in the same department. She introduced herself. She held a first degree in English teaching and obtained her Ph.D. degree in CALL in the USA.

She first discussed the agenda that occurred in most English classroom in Taiwan. Many students in Taiwan could not use English to communicate with other people after a long period of learning. To motivate learners, computers were introduced. She then gave all participants a clear framework regarding the learning theory (i.e. the collaborative learning theory) to adopt, teaching objectives to achieve (i.e. listening and speaking skills), and the CD ROM materials to be used (i.e. BBC Studio Classroom.)

Step two:
After the change agent’s speech, two teachers who worked at this institute of technology started to illustrate how they proceeded using computers in their own lessons. They all had a master’s degree in CALL, so they already had background in the use of computers and training in language teaching. They took turns demonstrating the procedure in the use of software, attempting to relate the procedure to the theory and teaching objectives. Because there were no students on the spot, all participants, including me, could only figure out how the procedure would go in class in our imagination.

The first teacher introduced the facilities, such as speakers, software, and the CD ROM materials. She also explained that because the collaborative learning theory was adopted in the course, so two students were in pair and used one computer together. In this way, students could learn from each other and solve problems together. Besides, because the course was intended to enhance students’ speaking and listening, she explained that the software was set to allow two-sided broadcasting between teachers and students or between students and students. She further explained that teachers who were interested in introducing the use of computers had to understand and agree on the aim and the procedure before the program was set in motion, and the software program and facilities had to be designed to achieve the aim.

After the first teacher, the second teacher turned on the computer that was
placed in the front of the classroom.) She explained that this computer
could monitor or control the screens of all students. There were a series of
questions shown on the screens awaiting students to answer in English.
Teachers could monitor whether students gave a correct answer through
speakers. When one student could not understand the questions on the
screen, s/he could speak to the teacher or other students through the speaker,
too. To answer students’ questions, the teacher could speak to students
through speakers and solved the problems immediately.

(In this workshop, there were more than 50 participants sitting in the lab,
watching the demonstration of the last speaker. After the last teacher
finished her part, my colleagues and other participants started to talk to each
other. I wonder how many participants really followed the demonstration
when they never had experience in the use of hardware and software. My
colleagues and I were not familiar with computers and software, so we could
not make immediate judgement on the effectiveness of computers. As
teacher P mentioned, ‘The use of computers looked interesting, but it is hard
to predict how long it will sustain students’ interest.’ However, the
two-sided broadcasting system looked very appealing to my colleagues.
For instance, teacher P told me that she was impressed by the software that
provided two-sided broadcasting system.)

Step three:
A few minutes after the second step, the technician from the computer
supplier introduced the facilities and equipment installed in this lab. He
also gave us a list of models of equipment. At this moment, some
participants asked the technician the cost of those facilities available in this
lab. He started to give out his name card. Many participants started to
laugh when they heard the expensive price.

(During the interval after the workshop, I had a short conversation with the
change agent in the corridor. I asked her the reaction of her students using
computers and the problem of teaching/learning load. She told me that her
students were quite happy with the use of computers. Also, the CD ROM
materials presented in the workshop were exactly the ones being used in the
current English program. Therefore, they were compatible with the existing
practice and did not cause the problem of increasing learning load for
learners or teaching load for teachers.)
Appendix 6-2: Teacher B’s classroom performance using computers on April 8, 1996, noted down by the writer as the lesson proceeded.

Teacher B was the first one to adopt the lab. He was the only one who had experiences in the use of computers when he was doing his degree in the U.S.A. Today he was going to use the computer/language lab. Because he was a newcomer, he had not developed a close relationship with other English teachers. Only teacher P and me were invited to observe his lesson using computers.

Five minutes after the lesson began, teacher P and me walked in from the back door. This was because we did not want students to be aware of our presence. However, some students noticed us and turned around to look at us. This was the first time I was invited to observe other teacher’s teaching. When we walked in, we saw three students who sat in the back playing computer games. Because the software used in the lab could not monitor or control students’ computer screen, teacher B sitting in the front did not notice such misbehaviour. Teacher P looked at me and gave me a disagreeing look. I did not like this kind of misbehaviour, either.

The lesson began and teacher B asked all students to look at the computer screen. Teacher B used the computer that was placed in the front of the classroom. Because there was no speaker installed, teacher B had to speak loudly throughout the lesson. This lab could seat 55 students, but today there were 45 students in the lab. On the computer screen there was a short article. Teacher B asked students to pay attention to the words that had the colour in red and then he clicked on those red words. When he clicked on each red word, there came out with the English explanation of such a red word. Teacher B translated those words into Chinese. After students understood the Chinese meaning of those red words, he translated the whole sentence into Chinese. In this way, teacher B kept explaining the vocabulary in Chinese and translating each sentence into Chinese. Most students watched the screen and listened to teacher B, some started to talk to each other, and very few played computer games. 30 minutes passed, teacher B completed the whole article, he started to tell students he was going to give a test on those red words in the next lesson. Students made some noise to express their unwillingness to have a test. It was about 5 minutes before the class was dismissed. Teacher P gave me a gesture to show me that we had to leave. Just before we walked out the back door, she whispered to me by my ear that ‘it was boring.’ Then, we walked out quickly.

After we returned to the office, teacher O asked me my opinions about teacher B’s lesson using computers. I asked teacher P to give her opinions, then said teacher P: ‘It was so boring. Students were not given the opportunities to talk. Teacher B just explained the vocabulary and translated each sentence into Chinese, which was exactly the same as the
method using textbooks. The so called computer/language lab was not proved to be more effective than the ordinary classroom. Besides, we saw three students sitting in the back playing computer games. Teacher B did not even notice their misbehaviour. Anyway, I am not going to use the lab.'

(I personally had the same opinion with teacher P. It seemed that teacher B failed to prove the effectiveness of the use of computers, as his lesson using computers did not prove to be any different from the traditional classroom in terms of activities, the role of teachers, and the role of students.)
Bibliography


Macmillan Heinemann English Language Teaching.


change in English language teaching, 94-104. Oxford: Macmillan Heinemann English Language Teaching.


