

UNIVERSITY OF LEICESTER

**TEACHER AGENDA AND TEACHER MUSEUM EXPERIENCE:
A COMPARATIVE STUDY OF ENGLAND AND TAIWAN**

by
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for the Degree of Doctor of Philosophy

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Teacher Agenda and Teacher Museum Experience: A Comparative Study of England and Taiwan

Yi-Chun Tsai

Abstract

This thesis explored and compared primary school teachers' agendas and museum experiences in English and Taiwanese schools. Its aim was to understand the impacts of schooling contexts on teachers' perceptions, attitudes and experiences of utilising museums to facilitate their teaching in schools.

This thesis employed a qualitative case study approach for its strengths in understanding the subject's viewpoints in his/her life context. Six case studies were conducted, three in England and three in Taiwan. Each case study focused on a primary school teacher's experience of conducting a museum visit. Unlike most research which only studies teachers within museums, this thesis adopted an approach which included participating in school life and recording every step when the teacher organised a museum visit, from preparation before the trip to the follow-up work. This strategy helped to thoroughly understand how the teacher's agenda was developed in the school context. It also investigated the whole process of the teacher's museum experience, and the effects of the teacher's agenda on this experience. In addition, this thesis compared the patterns which emerged from the English and Taiwanese case studies. This comparative approach further revealed the subtle, implicit sides of the teachers' ideas and schooling cultures.

The findings of this thesis confirmed the hypothesis that the schooling context has a profound impact on teachers in terms of their attitude towards and usage of museums as an educational resource. Teachers, either explicitly or implicitly, do bring a set of values, needs and expectations when they come to museums. These perceptions, in other words, teachers' agendas, are substantially developed in schooling contexts. In terms of the schooling context, the thesis further identified its two main components, namely educational ideologies

and structures. Due to different educational beliefs and curriculum requirements, English and Taiwanese teachers display contrast attitudes and approaches when they use similar educational resources--- museums.

The findings of this thesis implied the importance of the socio-cultural context that visitors bring to the exhibits, and in the case of this thesis, the schooling experience teachers bring to museums. This thesis also suggested that what teachers perceive and expect from the museum may not necessarily fit with the museum's agenda, that is, the message the museum tries to convey and what it expects visitors to do. In this case, teachers' experience in the museum will be more affected by their own rather than the museum's agenda because visitors are entitled to freely use museums in their own ways. This insight has encouraged museums, policy makers and researchers to pay close attention to the aspect of teachers' agendas, and to use a more holistic perspective to examine visitors' museum experiences which should not be limited to the museum setting, but should also extend to their life contexts in which their agendas are developed.

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Therefore, this thesis is dedicated to all of them, who care for me and whom I truly care for.

List of Abbreviations

DES	Department of Education and Science
DfEE	Department of Education and Employment
DfES	Department of Education and Skills
ERA	Education Reform Act
HMI	Her Majesty's Inspectorate
ILEA	Inner London Educational Authority
LMS	Local Management of Schools
MGEP	Museums and Galleries Education Programme
MOE	Ministry of Education
NC	National Curriculum
NHM	Natural History Museum
NMNS	National Museum of Natural Science
OFSTED	Office for Standards in Education
SATs	Standard Assessment Tests
SCAA	School Curriculum and Assessment Authority

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CHAPTER 1

INTRODUCTION

1.1 The Context of the Study

This thesis examines and compares teachers' agendas and museum experiences in two different schooling contexts, namely England¹ and Taiwan. The aim is to understand the impact the schooling contexts have on teachers' ideas, attitudes and ways of using museums. By shedding light on this area, this thesis expects to provide museums with guidelines to help them rethink their educational approach and thereby form a more effective relationship with schools.

As any research is driven by an agenda defined by its author, it is necessary for me, before expanding on my subject, to explain how my personal experiences have shaped my research questions and led to the formation of this study. My experience of education both in Taiwan and in England has highlighted a contrast between the two different styles of schooling. My sixteen years of education in Taiwan, which stresses the diligent following of teachers' instructions, has hindered my study in England. From time to time, I have found myself lost by the liberal teaching approach used by English teachers, which greatly encourages students to explore their own field of study --- find their own questions, formulate their own strategies of inquiry and develop their own ideas. My experience of these cultural differences in education prompted me to initiate the research questions of this study: in their different schooling contexts, how do English and Taiwanese teachers perceive and value museum visits?

¹ Schooling in England is slightly different from that in Wales, and very different from Scotland. Therefore, this thesis primarily discusses English schooling in order to be more specific. However, a discussion of the British experience in general, looking at areas such as the government policy, development of museums, patterns of school visits, is also included in this thesis.

How are their museum experiences related to their school contexts? In other words, this research attempts to explore and examine the effect of the schooling contexts on teachers' museum experiences. By comparing the cases in England and Taiwan, this research expects to reveal the different characteristics of these schooling contexts more explicitly.

The use of a comparative approach to examine the effects of contextual factors on teaching and learning is prevalent in the study of formal education, but is rarely applied to the field of museum education. Such an approach particularly catches researchers' attention today when many countries frequently exchange educational ideas and practices. In the current information-based age, education has become a key global industry. Many countries have attempted to learn good educational practices from overseas in order to improve their own educational standards. In the cases of Britain and Taiwan, the British government has actively promoted the approach of whole-class teaching which has long been a feature of Taiwanese schooling, whereas in Taiwan, the differentiated approach recently introduced by the educational reform has apparently been adopted from the British experience. These intensive interactions have intrigued many researchers and suggested the application of a comparative approach. By using this approach, researchers can gain a deeper understanding of educational practices in other countries and, furthermore, use this understanding to reflect upon their own experience.

The results of this type of comparative research often highlight the profound influence of socio-cultural contexts on education. In addition to the field of education, this issue has been a recurrent theme in many other disciplines such as anthropology, sociology and psychology (as will be discussed in Chapter 2). The fruitful results of comparative studies in these diverse disciplines have mostly been applied to the understanding of teaching and learning in school settings, but rarely extended to the territory of learning in museums. The use of a comparative approach, to investigate the impact of contextual factors on education, should no longer be overlooked in the study of museum education today. As the following paragraphs explain, there are two main reasons for this.

Firstly, because of the emergence of the concept of lifelong learning, the educational role of museums is not only emphasised by museum professionals, it is also enthusiastically supported by governments across the world. For example, the British government allocated a tremendous amount of funding to the establishment of Re:source: The Council for Museums,

Archives and Libraries in 2000. One of the key objectives of this new organisation is the promotion of lifelong learning. In Taiwan, public museums have always been the responsibility of the government's social education division and been funded for the purposes of education and culture. Since 1998, the government's second largest amount of expenditure has been for the category of Education, Science and Culture, of which a significant proportion has been consistently dedicated to museums.² This illustrates the Taiwanese government's primary agenda in education and the role that museums play in this mission.

Although the significance of museum education is internationally recognised nowadays, research in this area has not yet been carried out at an international level (Ambrose, 1997). There is a wealth of knowledge about formal education in terms of how the wide variety of educational systems, teaching approaches and learning styles relates to divergent socio-cultural contexts. However, studies of museum education are often limited to the scope of the researchers' own countries, especially those of Europe and North America. There is thus a need to extend the research boundaries, both geographically and intellectually, by using a comparative approach to study the diversity of museum practices and visitor experiences in different educational contexts.

Secondly, cooperation with schools has always been a commitment of educational work in museums (as will be discussed in Chapter 3). It is also the British and Taiwanese governments' policy to strengthen the link between museum education and school education in order to maximise the quality of children's learning. In Britain, the National Curriculum explicitly encourages schools to use museum resources to facilitate children's learning. Governmental guidance regarding the use of museums in supporting the National Curriculum has subsequently been provided to both schools and museums.³ In 1999, the Department for Education and Employment⁴ launched a new Museums and Galleries Education Programme, the biggest scheme ever undertaken in museum education, to particularly support museum projects for school children. Likewise in Taiwan, the encouragement of school visits to

² From 1998 to 2001, museums have received at least 0.3% of the government budget for Education, Science and Culture (144 million US dollars in 2001). Data source: Central Government Budget 2001, DGBAS, see Yang, (2002), Chapter 3.2.

³ Official publications include *The National Curriculum: A Guide for Staff of Museums, Galleries and Historic Houses and Sites* (1990), *A Guide to the National Curriculum: for staff of museums, galleries historic houses and sites* (1995), and *Learning Through Culture: The DfES Museums and Galleries Education Programmes: a guide to good practice* (2002).

⁴ Now known as the Department for Education and Skills.

museums is part of the government's policy: this often involves local educational authorities making official requirements for their schools to visit museums. It clearly demonstrates the government's desire to connect these two types of educational institution.

Although working with school parties has always been at the heart of museum education and is a key concern for these two governments, there is an apparent lack of research into how museum visits are linked to the schooling context. Much of the research in this area has applied quantitative methods to study the number and frequency of school visits, or teachers' choice of destinations, or museum's facilities (will be discussed in Chapter 3). Very little effort has been expended on studying why teachers decide to conduct a museum visit, choose a particular museum to visit or form certain expectations. Also little is known about how their decisions and expectations influence their experience of conducting a museum visit. To answer these 'why' and 'how' questions, it is inescapable that a qualitative approach should be employed to examine teachers' experiences in depth, especially the experiences in the schooling contexts which form and condition their decisions and expectations in professional practice. Furthermore, the use of a comparative approach is useful for understanding schooling contexts in different socio-cultural circumstances. It is also expected that, using this comparative approach, the implicit characteristics of different schooling, such as educational beliefs and pedagogical concerns, can be more clearly revealed. These latent attributes are assumed to have a great impact on teachers' attitudes and values when they use museums.

1.2 Research Objectives and Chapter Outlines

The discussion in section 1.1 explores the significance of museum education in both international and national contexts. It suggests that the use of museums to promote lifelong learning and to complement school education is both an international trend and an objective of individual governments. Under these circumstances, it is indeed necessary to use a broader, comparative perspective to examine museum education at an international level, as well as a qualitative approach to study how museum education is linked to school education within individual countries.

In pursuit of these goals, this study uses a qualitative, comparative approach to examine and compare primary school teachers' agendas and museum experiences in the English and

Taiwanese schooling contexts. The word agenda here refers to the teachers' needs, and expectations of what the museum visits will hold. Teachers' museum experiences are not limited to the events inside museums, but also include the preparations beforehand and follow-up work after the museum visits. The hypothesis of this thesis assumes that different types of schooling have different impacts on the development of the teachers' agendas, and different subsequent effects on the teachers' museum experiences. Based on this assumption, there are three objectives the research set out to achieve. Firstly, this thesis aims to provide a thorough understanding of the nature of teachers' agendas and the formation of these agendas in the schooling context. Secondly, the thesis will investigate the whole process of how teachers conduct museum visits, with a particular focus on the effects teachers' agendas have on these experiences. Thirdly, the thesis aims to compare English and Taiwanese teachers' agendas and museum experiences in order to highlight the impacts of different schooling contexts on teachers.

This thesis is divided into eight chapters. In this introductory chapter, the research questions and the approaches I propose to use in tackling these questions are briefly introduced. The importance of this research in relation to the current educational context at both international and national levels is also explained (1.1). This is followed by a definition of the research objectives and an outline of the chapters (1.2).

Chapter 2 analyses teaching in different schooling contexts. Sections 2.1 and 2.2 respectively discuss 'schooling' and 'teaching' from theoretical perspectives, with a particular focus on different styles of schooling and teaching approaches within diverse socio-cultural contexts. 2.3 discusses teaching in real-life situations, examining practical issues teachers may encounter in their schooling contexts. The problems brought about by recent educational reforms are highlighted in particular. Many English and Taiwanese teachers faced such problems during the period of this research. These three sections (2.1 to 2.3), consisting of theoretical perspectives and practical issues, form a framework for discussing teaching within a schooling context. Based on this framework, two case studies (2.4 and 2.5) regarding current teaching in primary schools in England and Taiwan are examined. These provide important information about the schooling contexts in which the teachers' museum agendas are developed.

Chapter 3 discusses school visits to museums from different perspectives. Section 3.1 reviews the historical development of the relationship between museums and schools. 3.2 looks at the development of the evaluation of museum education. In 3.3, the unique educational potential of museums, different from that of school education, is discussed from a range of theoretical perspectives. 3.4 and 3.5 present the case studies of school visits to museums in England and Taiwan. Each case study consists of two parts. The first part describes the history, development, and patterns of school visits to museums in the country concerned. Following this general background information, the second part introduces a particular museum and its relationship with schools. The Natural History Museum (NHM), London (England) and the National Museum of Natural Science (NMNS), Taichung (Taiwan) were chosen for discussion. As the most popular museums for schools in their respective countries, these two museums were chosen as field-sites to conduct the case studies regarding the use of the museums for visits by local primary school teachers (Chapter 5 and 6). Background information about these two museums in terms of their history, educational work and their relationship with schools is therefore provided.

Chapter 4 deals with the methodology of this thesis. Section 4.1 explains the research design, based on careful consideration of research questions and objectives. In brief, this thesis presents case studies in England and in Taiwan respectively, each focusing on a primary school teacher's experience of conducting a museum visit. The configurations of the English cases and the Taiwanese cases are compared, and their differences and similarities are discussed through the lens of schooling contexts. Of particular interest in each case study is the account of the teacher's agenda and museum experience in his/her own words, as well as how this agenda has developed within the school context and how it affects the teacher's museum experience. For the research objectives proposed, a qualitative case study approach is employed in this study because of its unique strength in understanding the personal view of a subject studied in his/her own context. The nature of this approach, along with methodological issues, is discussed in 4.2. After the justification of the research methods used in this study, the rest of the chapter details the procedure for conducting the case studies (4.3) and the analysis of the research data (4.4).

Chapters 5 and 6 present the case studies in England and Taiwan. Three English primary teachers' experiences of visiting the NHM are examined in turn, as are three Taiwanese teachers' experiences of visiting the NMNS. Each case study consists of three parts. The

first part briefly describes the background of the participant teacher and the school. The second part examines the teacher's opinions regarding the value of educational visits in school life. These areas establishes the broad schooling context in which the teacher's museum agenda is initiated and formed. The third part of the case study investigates the teacher's agenda and experience when (s)he actually conducts a museum visit. In particular, the teacher's agenda for this visit is examined in relation to his/her current teaching in school. Furthermore, the teacher's experience of conducting a museum visit is described in detail, with an emphasis on how the teacher's agenda affects this process.

Chapter 7 compares and discusses the patterns emerging from the case studies. Section 7.1 proposes a theoretical framework for explaining these patterns, which is a synthesis of the main discussions in previous chapters (mainly from Chapter 2 and 3). 7.2 and 7.3 discuss the English and Taiwanese schooling contexts, both structurally and ideologically, in which the teachers' museum agendas are formed. 7.4 compares various aspects of English and Taiwanese teachers' museum agendas. 7.5 discusses the whole process of the teachers' museum experiences. At the end of Chapter 7, a table (7.1) is included, summarising the different patterns found in the English and Taiwanese case studies.

Finally, Chapter 8 draws conclusions from this thesis by reviewing the work carried out. Section 8.1 provides a brief summary of the research. 8.2. reviews the research results, identifying their significance, implications and applications. 8.3 verifies the value of this research and recommends guidelines for further practice.

CHAPTER 2

TEACHING IN PRIMARY SCHOOLING: A COMPARATIVE PERSPECTIVE

Introduction

This chapter explores various issues of teaching in primary schooling. It provides a broader context of schooling within which to further analyse how teachers' agendas and museum experiences are developed in schools. Three areas of discussion are covered in this chapter. Firstly, the chapter begins by comparing theories on schooling from several academic disciplines. This review highlights the diversity of schooling and teaching styles in relation to different socio-cultural contexts and educational beliefs. The second area of discussion focuses on how a teacher's practice interacts with and is conditioned by a schooling context. A working framework for the analysis of teaching in a schooling context is established. Based on this framework, the third part of this chapter discusses current teaching methods in primary schools in England and Taiwan. The information is highly pertinent to understanding the case studies of English and Taiwanese teachers' agendas and museum experiences that will be presented later in this thesis.

2.1 Understanding Schooling: A Comparative Perspective

Schooling has been defined by Scribner and Cole (1973) as "institutional formal education" which has a unique form, and is distinguished from other types of education such as teaching and learning at home or during ritual activities. This type of education has become a universal phenomenon and the idea of "schoolness", as suggested by Jordan and Thrap (1979: 269), is a universal conception that is general enough to be applied across countries. In broad terms, schooling has two agendas to achieve. One is that all pupils are taught the knowledge and skills embodied in the curriculum in order to function in a modern society.

The other is to develop pupils into citizens to meet the social and cultural goals of society (Thomas, 2000: 26).

It is observed that there is an increasing convergence in schooling throughout the world. For example, the common elements of schooling such as the educational goals, the basic organizational structures and the orientation of curricula are similar throughout the world (Altbach, 1991). It is interesting to see that, according to the study of Benavot and Kamens (1989), the primary curricula of 130 countries not only contained the same subjects but also give them a remarkably equivalent amount of time for instruction.

Despite its recognisable transnational agendas and features, schooling also has its intra-national features that are deeply embedded in the social-cultural context of a society (Altbach, 1991). Differences in schooling across countries are often revealed and illuminated by using a comparative approach. Traditionally, the comparative approach applied in the field of education is usually used for analyses at the level of policy and provision. Recently, research has shifted its attention to compare the social-cultural contexts as well as the “subjective realities of different populations” (Broadfoot et al., 1993: 10) to analyse education. This shift has renewed researchers’ vision in a way which “makes the familiar strange and the strange familiar”⁵ in terms of viewing their own educational practices and those of others. The benefit of such an insight has been clearly pointed out by Stevenson and Stigler (1992: 16) in the case of cross-cultural comparisons, which can also be applied to other areas of research on education:

“Cross-cultural comparisons can help us discover characteristics of our own culture that we fail to notice because we are so familiar with them. Through such comparisons, our perceptions become clearer and sharper. In fact, we are stunned at times to realise that what we have thought to be ordinary is actually very unusual in other cultures.”

Noticeable examples of the use of the comparative approach in education can be found in the recent studies of students’ academic achievement at the international level. For example, in America, Stevenson and Stigler (1992) have studied students’ mathematics achievements of four countries namely, China, Japan, Taiwan and the United States. They attributed the different results of students’ achievement to their respective social-cultural contexts in which

⁵ It is T. S. Eliot’s words of describing the quality of a good anthropologist. Quoted in Spiro, M.E. (1990).

motivations, beliefs, attitudes and practices of teaching and learning are generated and interplayed. In the UK, a similar type of research was conducted by Reynolds and Farrell (1996). In their study, they compared English students' educational achievements to those of students in other European countries and also in the Pacific Rim countries such as Taiwan and Korea. The study suggested that contextual factors are associated with students' academic outcomes. For example, it recognised that the productivity achieved by whole-class instruction in the Pacific Rim countries may be linked to their unique culture of collectivity, and this approach should be carefully evaluated before being adopted in schools of a different culture (Reynolds and Farrell, 1996: 59).

The research discussed above illustrates the differences in schooling and in its contexts. There are other disciplines such as sociology, anthropology and psychology using the comparative approach to further explain why and how these differences in schooling are caused from diverse perspectives. For example, in sociology, functionalism emphasises the social functions of schools which are providing a skilful workforce for the industrial economy as well as maintaining social solidarity by transmitting the common culture and morality. This version is challenged by Marxism, which uses economic determinism to argue that schools are social instruments for producing a labour force to uphold capitalist values and relations, thus inevitably resulting in social division and inequality (Burtonwood, 1986: 24-25). Both viewpoints can be examined by comparing the cases of Singapore and the UK. For example, in both countries the educational policies and design of curricula are largely derived from economic considerations, one essential function of schools being to maximize the potential of the children--- a future workforce that will be able to compete globally. However, looking at the different social contexts, the social divisions in Singapore are based solely on academic achievements as its educational system provides similar opportunities for everyone. On the contrary, social divisions in the UK are manipulated by the existence of a prestigious fee-paying education sector, which is criticised as being constituted to "protect the advantaged and perpetuate inequality" (Vlaeminke, 1998: 19).

While the use of sociology can explain schooling from broad national and international contexts in which economic, social and political forces interact with each other, the discipline of anthropology analyses schooling internally, examining how contextual factors affect the educational process. Educational anthropology regards schools as "culturally normative institutions charged with responsibility for maintaining culturally defined standards and

expectations” (Spindler, 1987: 12), and the educational process as a “calculated intervention”(p. 6). This means that teaching and learning are governed by shared norms and perceptions, many of them implicit, in terms of what should be taught, how much should be learned, and how teaching and learning should be conducted. In an ethnographical study comparing American and German primary schools, the research finds that teachers and students in each respective country display coherent behaviours based on the shared norms and perceptions, which are significantly different from each other. For example, external authority is the salient characteristic of the German school, which is assumed as a natural condition and as an imperative in order to maintain order. On the other hand, self-control is believed to be the basis of order in the American school, and its development is therefore a major concern of education (Spindler, 1987).

The use of a psychological perspective further explores the behaviours and minds of the main participants in the schooling process--- teachers and students. For example, the psychologist Hofstede (1986) suggests that there are different “cognitive abilities” based on cultural values and needs. As he explained, “our cognitive development is determined by the demands of the environment in which we grew up: a person will be good at doing the things that are important to him/her and that (s)he has occasion to do often” (p. 305). For example, in China, the nature of the Chinese script requires the development of a child’s ability to recognise patterns. This ability is strengthened by the rote learning and repeated practice imposed by teachers. By comparison, German teachers tend to challenge children hard so that they “are brought up to believe that anything that is easy enough for them to understand is dubious and probably unscientific” (Hofstede, 1986: 305).

In recent years, social-cultural theories have often been applied by psychologists to reveal teachers’ and children’s mental conceptions about teaching and learning. The kernel of the theories assumes that human thought, perception and action should be approached in terms of meaning; these meanings are socio-culturally affected, on which basis teachers and students decide and justify their behaviours. For example, the meaning of teaching as a profession may have different meaning in different societies because “the conceptions of the job and of the role depend upon social representations of the job which, as well as being useful for deciding on and justifying professional practices, also serve as a common set of group-defining characteristics shared by all the individuals who have those representations” (Broadfoot et al., 1993: 12). In the case of exploring teachers’ perceptions of their

professional responsibilities, the research found that English teachers had a more 'open' concept with much more emphasis on the personal and social development of children. Furthermore, teaching practices displayed by English teachers were more active and put more importance on discovery-based learning. In contrast, French teachers tended to confine their duties to strictly academic matters and were more concerned with the products of learning such as correct answers or exam success (Broadfoot et al., 1993).

A similar approach was applied by Planel to study the thinking of English and French primary school students. It is very interesting to note that the findings of this research display a significant correlation to that of Broadfoot's study. For example, while Broadfoot's study showed that English teachers had a more open concept of learning and had more creative teaching approaches, Planel's study showed that English students saw that there were different ways of learning---through books, teachers, play, etc., because they were frequently encouraged by their teachers to find out answers themselves. Furthermore, they were more intrinsically motivated by the work tasks than their French counterparts. On the other hand, while French teachers appeared to be more academically oriented, French students had lower expectations of the schoolwork being interesting or enjoyable, but regarded it as the means by which they could pass up through the system and find employment in the future. In addition, their idea of learning was mainly teacher-led and was more restricted and methodical, as French teachers favoured more systematic and logical ways of instruction (Planel, 1997). A comparison of these two studies demonstrates that notions of teaching and learning have shared meanings and assumptions among groups of people. Furthermore, based on these shared notions, there are different forms of instruction and different approaches to learning.

This insight is crucial for understanding teaching and learning in different schooling contexts. It may explain why some approaches such as object-teaching are favoured in some schooling contexts but are dismissed in others; why some teaching resources such as museums are overlooked by some societies but popular in others. In order to understand what museum visits mean to teachers and why they use museums in certain ways, it is necessary to first understand how teaching and learning are perceived by teachers in different schooling contexts.

2.2 Understanding Teaching--- The Theory of Pedagogy

Teaching can be counted as a uniquely human activity in comparison to the learning behaviours shared by many species (Visalberghi and Frigaszy, 1988; Premack and Premack, 1988). Research argues that although animals show comprehension of the physical principle which is the foundation of learning through observation, they lack an understanding of causality. This understanding serves as a basis for the model (teacher) being able to judge whether the novice's behaviour is appropriate, and accordingly, to teach the novice how things are supposed to be. Furthermore, animals also lack an understanding of the mental state of others. In other words, they fail to recognise if their young or peers don't know something, and consequently, there is "no ascription of ignorance, no effort to teach" (Olson & Bruner, 1998: 12). The above arguments further suggest that, to be able to teach, models (teachers) need to know what is appropriate to teach and what the novice does not know yet.

This basic principle can be further elaborated and applied to teaching practices in human society. It implies that teaching requires two premises: the assumption of knowledge and the assumption of the minds of learners. In theoretical terms, how people teach --- the theory of teaching, depends on the association of the theory of knowledge --- what is knowledge and how to acquire it, and the theory of learning --- how the learner's mind works (Hein, 1998).

Hein (1998) has proposed an educational theory which explicitly explains four pedagogical styles and their correlation with theories of knowledge and learning. In this theoretical framework, the four types of education which reflect four styles of pedagogy are classified as didactic/expository education, stimulus-response education, discovery learning and constructivism. The correlation of each educational type to the theories is illustrated as follows:

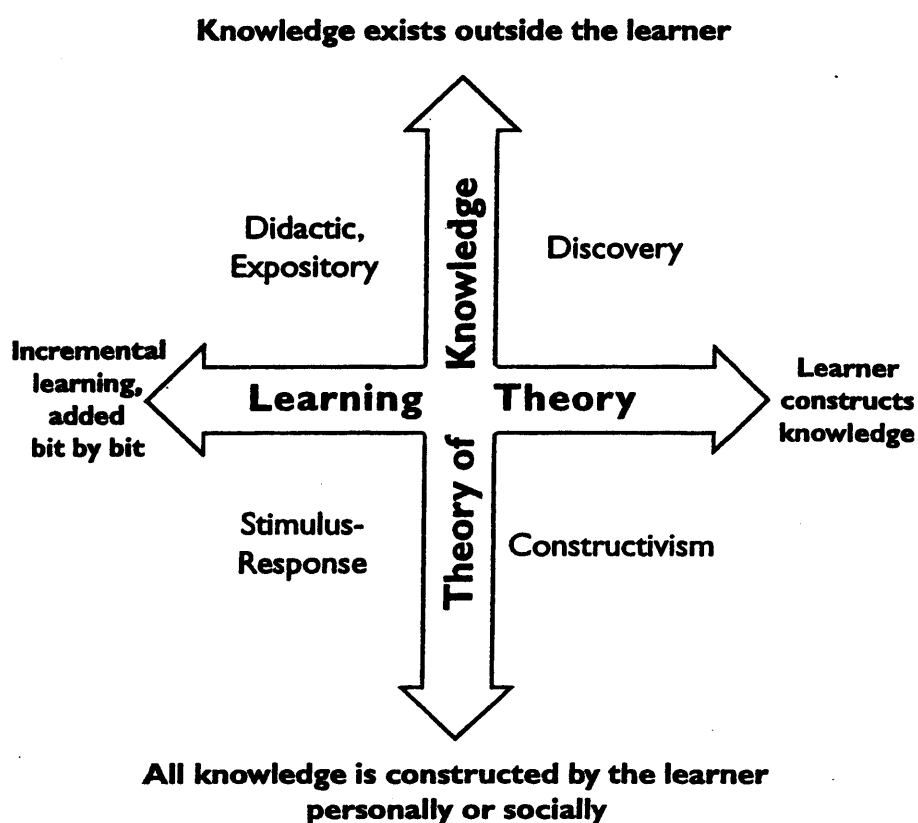


Figure 2.1 Education Theories. Source: Hein (1998: 25).

According to this diagram, the upper domains belong to didactic education and discovery learning. Both types of education believe in the existence of a reality which is as solid and concrete as the physical world. Accordingly, the real knowledge and truth must exist 'out there' and the learner must learn them externally. However, these two types of education are very different due to their opposite beliefs on how people learn. Didactic education advocates the transmission-absorption notion of learning, indicating that learners, like vessels, can be filled with knowledge piece by piece from the outside world. If teachers subscribe to this view of education, they intend to impart the 'true' content of information to learners. In addition, as the learning process is assumed to be as straightforward as filling vessels, the teachers' attention is focused on organising teaching materials in an orderly fashion, from the simple to the complex, so that learners can accumulate knowledge step by step. This kind of education is mostly seen in school settings in which the contents of teaching are hierarchically structured and learning procedures are rigidly arranged.

Different from didactic education, discovery learning sees learning as an active process and regards learners as active participants whose minds undergo changes as they learn. Reflecting this assumption, teaching approaches should enable learners to actively engage in the learning process by exposing them to a stimulating and challenging environment where they can explore, manipulate and experiment with the materials or information provided. By doing so, learners are expected to eventually discover or find out the existing knowledge or truth themselves. 'Learning through doing' and 'finding out answers for themselves' can be summed up as the basic principles of this kind of education.

As opposed to didactic education and discovery learning, which believe in absolute and external truth, stimulus-response education and constructivism assume that there is no objective truth; all knowledge is a man-made product constructed personally or socially. However, due to their opposing views about how people learn, these two types of education display fundamental differences in their teaching approaches. In the case of stimulus-response education, it is believed that children can learn whatever teachers want them to learn by responding to specific stimuli. To execute this approach, teachers firstly need to have a clear idea of what has to be learnt, which may not be as a canon validated externally. To reinforce this idea, teachers exclusively impose methods (stimuli) upon learners and expect that learners will eventually display the desired behaviour or thinking congruent to the idea set up first by teachers. In other words, the focus of this kind of education is on teaching methods rather than on the value of the content taught. Such an approach is favoured by behavioural or technique training as characterised, for example, in military training or the improvement of skills in answering test questions.

As a rather new education theory, constructivism postulates that there are multiple realities and truths which, rather than being canonically defined, are constructed by the learner's free will, with his/her own interpretation dependent on his/her socio-cultural background. A learner is also a contributor to the making of meaning, thus learning involves the participation of both the hands and mind of a learner. In practice, constructivism tries to situate learners in a stimulating environment equipped with rich information or materials. Ostensibly, it may seem similar to discovery learning. However, unlike discovery learning, which sets determined conclusions or fixed facts for learners to reach, constructivism expects a learner to compose his/her own conclusions or interpretations. As a consequence, teachers will provide rich materials or information and present them from various perspectives, thereby

allowing learners to select information, according to their learning paces and interests, and to compose and to validate their own conclusions.

Hein's educational theory explains that the different pedagogical styles come from different views of human beings regarding the nature of the knowledge and of learners and learning. In the real world, this assumption is often confirmed by fruitful studies of anthropology and psychology: the anthropological literature presents a stunning variety of teaching practices in different cultural settings and the psychological research also uncovers diverse thinking in different societies at both conscious and unconscious levels.

In recent years, the cultural psychologists Olson and Bruner (1998) have called for 'anthropology of pedagogy' to link teaching behaviour with cultural beliefs regarding the mind of a society. They propose a model of 'folk pedagogy' as an alternative way of analysing teaching. The kernel of this approach assumes that: "Pedagogy is never innocent" (p. 12) but is a deliberate device based on a set of beliefs about learners and learning, which in psychological terms is the so-called 'theory of mind'. Significantly, this theory of mind does not exist in a vacuum but is fostered and defined by its context. Thus, the folk approach has much in common with the perspectives of social cultural theories as mentioned earlier.

Basically, the notion of folk pedagogy is not far from that of Hein's. However, unlike Hein's theory, which is based on more logical thinking such as theories of knowledge (epistemologies) and theories of learning, folk pedagogy is more concerned with people's implicitly intuitive assumptions about how our own minds and the minds of others work. Overall, Olson and Bruner (1998) summarise four pedagogies based on four different conceptions of children's minds: (1) teachers who, conceiving of children as doers who are unable to do something, provide demonstrations for children to imitate; (2) teachers who, conceiving of children as knowers who are ignorant of something, provide didactic instruction; (3) teachers who, conceiving of children as thinkers who have their own ideas and need to be understood, try to foster discussion; (4) teachers who, conceiving of children as experts who possess their own beliefs and theories, try to assist children to evaluate their own thinking in reflection to what is taken to be known in the world.

The approach of folk pedagogy is now often applied in cross-cultural studies which attempt to further explore the values and assumptions of learning and teaching, in other words, the

'hidden curriculum' underlying educational practices. For example, Hatano and Inagaki (1998) have recognised distinctive folk pedagogies which divide American and Japanese teachers. The most profound difference between them is the American teachers' inclination towards individualism in contrast with the collectivism fostered by the Japanese teachers. In classroom practice, American teachers are willing to accept the large individual differences among students and even try to adapt their instruction to meet individual needs, whereas Japanese teachers stress the experiences and ideas shared within a group. In the case of requiring students to answer, American teachers tend to successively ask many students the same question in order to get individual feedback; Japanese teachers will only ask one student to answer and then ask other students: 'Do you agree?', as a strategy to achieve a group concurrence. Relevant to these tendencies, another difference in pedagogy is that American teachers tend to socialise the students into becoming good speakers by giving them more opportunities to express their ideas and by praising their correct answers to boost their confidence. On the other hand, Japanese teachers train students to listen to others keenly and carefully.

Furthermore, different assumptions about knowledge and minds will consequently affect ways of using teaching materials in different societies. For example, in the case of hands-on activities, research has found that demonstrations and experiments are often neglected in Chinese schools because traditional Chinese culture believes that theoretical knowledge is superior to practice, and students are often seen as passive rather than active learners (Su, Su and Goldstein, 1994). These attitudes result in a different phenomenon from that observed in American schools when teaching science:

"In China, hands-on practices serve the purpose of providing the theories and results written in the textbooks. The students are required to conduct the same experiments, using the same methods and equipment, and are expected to come up with the same results. In the US, however, the purpose of hands-on activities is to discover the theories and results in and beyond the textbooks. The students therefore are encouraged to conduct different experiments, use different methods and equipment, and come up with different solutions and conclusions." (Su, Su and Goldstein, 1994: 263)

A very similar phenomenon is also observed by Galton (1997) in Singapore and Britain, as these two countries share similar cultural backgrounds with China and America. For

example, in a comparison of the teaching of mathematics in these two countries, Galton (1997: 109) concludes that teachers in Singapore will use practical demonstration so that children can 'confirm' the mathematical principles they have been taught. On the other hand, British teachers use it so that students can 'infer' the rules by themselves. Thus, in observation, Singaporean students spend nearly 66 per cent of the lesson listening and watching teachers' demonstrations of the principles, while British students spend much more time working on their own to figure out the rules by themselves.

2.3 Teaching in the School Context --- Ideas and Structures

Although, in theory, the adoption of teaching approaches is mainly dependent on ideas of knowledge, learner and learning, in reality, it cannot ignore what Gage (1985: 5) has suggested as "a scientific basis of the art of teaching" to define pedagogy in action. For the scientific part, it means that teaching requires pedagogical principles in terms of assumptions about learners, learning and the knowledge to be taught. Nevertheless, teaching also needs skills of creating art such as improvisation and spontaneity so that teachers can apply these general principles in a flexible and creative manner according to the context in which they are working.

Gage's suggestion highlights the importance of the contextual factors which may condition the teachers' approaches. A similar consideration is also given by Galton (1997: 110), who suggests that teaching is a "pragmatic activity": when teachers try to apply their ideas in the school context, they have to take many considerations into account. Some of these considerations may be invisible and uncertain in advance, such as the characteristics or abilities of the children, the availability of teaching resources or the support of colleagues and parents. Some of them are concrete and will immediately affect the application of the teachers' ideas, such as the class size, classroom layout, school system, or curriculum.

Because a school is a formal organisation, it constitutes structures and agendas for implementation. The more predictable and permanent structural features, such as the school system or curriculum, are often the manifestation of "the network of beliefs, values and assumptions about children, learning, teaching, knowledge and the curriculum" (Alexander, 1984: 14). In other words, educational structures are often the outward signs of the inward ideological system of a particular country in its specific socio-cultural context (Alexander,

1984, 1992, 1995; Galton, 1997). For example, in Scandinavian countries, which value a high degree of individual autonomy, class sizes are limited by law to below twenty-five pupils (Galton, 1997: 102). In Denmark, students starting from the primary level are required by law to be involved in planning the content of their lessons and other classroom issues (McAdams, 1993: 78). In contrast, in China, where traditional values stress the stability and cohesion of society rather than the development of individuals, the educational system, from the curriculum to the textbooks, is highly centralised and directed towards the moral collective orientation (Cortazzi, 1998: 209-210).

As shown above, the ideological system and structures are normally indissolubly linked: structures manifest and consolidate ideas, and ideas interpret and justify structures. Their inescapable relationship is further explained by Alexander (1992: 171):

“They do not exist independently of each other. Ideas generate structures; but structures also generate ideas in order to explain and sustain structures. In conjunction, ideas and structures secure collective cohesion and continuity, and confer identity and security on the individual.”

In the optimal circumstance, the teachers' ideological system is in harmony with the associated educational structures. It is this interplay of ideas and structures that produces the distinctive primary school culture found in any particular country (Alexander, 1984, 1992, 1995; Galton, 1997). However, their inseparable relationship is sometimes ignored by the policy makers: they change educational structures through curriculum reform or through a shift in teaching and learning methods without considering the prevailing belief system upheld by both teachers and the society. Such rapid changes in educational structure sometimes bring out very different ideas and values which contradict the long-established ideological systems of the recipient countries. In this case, changes may be seen as a threat to the entire connected package of ideals, practices and institutions, in other words, the professional consensus of primary schooling (Alexander, 1995: 13).

Research has confirmed that teachers tend to see changes as a challenge to their professional beliefs and identity and thus display resistance. A study by Burnaby and Sun (1989) demonstrates this psychological resistance. This study shows that many Chinese teachers argued that the communicative approach of learning foreign languages, a method imported

from Western countries, is inappropriate when applied to the Chinese context. Several reasons were identified in the research. The most interesting one among them is that many Chinese teachers felt inferior if they used this new approach. To them, the use of new approaches seemed to indicate that they lacked professional ability and knowledge in providing students with formal academic study, the aspect of learning that really matters in China.

Apart from the deliberate resistance to change, it is also observed that those teachers who accept the change and adopt it into their practice may interpret and mobilize this 'input' in their own ways, which are different from the original intention of the central policy (Fuller and Clarke, 1994). For example, Cohen's (1990) case study shows one American teacher's unknowing subversion of innovation in the new curriculum. In this study, the teacher was very positive about the more inventive teaching approaches introduced by the new curriculum. Yet observation showed that there was little alteration in her teaching methods; instead she just recast the new curriculum framework with her old, didactic approaches. Another notable example was given by Suddaby (1989), who studied the impact of educational reform on teachers in the Soviet Union. The study found that Russian teachers had a very different interpretation of the individualised approach compared with that of the Western understanding. In their view, the individualised approach is a means to help backward students catch up with the progress of the class. In other words, its aim is to 'equalise' the class so that all students have a similar development. This perception is totally opposite to the Western assumption of individualised approaches: they are supposed to develop the full potential of each individual, inevitably resulting in an increasing gap between the strongest and the weakest (p. 250).

Galton (1997: 105-106) suggested the term "curriculum hybridisation" to describe the contradictory situation when primary schooling is undergoing rapid transformation. He suggested that, when teachers' beliefs conflict with the curriculum changes, teachers tend to simply 'bolt' the innovation on to their existing practice with no substantial alteration in their perceptions. This situation may be caused by teachers' conscious resistance to change, as seen in the case in China; or unconscious persistence in old habits, as seen in the case of the American teacher in Cohen's study; or it may be due to teachers' misinterpretation of the new policy, as seen in the case in the Soviet Union. No matter what the cause, all these cases highlight the persistence of teachers' ideas and practices, and moreover, the continuing

features of primary schooling even when it has undergone rapid change.

Such an insight is very important in understanding primary schooling in today's context. In the context of accelerated globalisation, schools are facing a formidable challenge: they no longer exist just for training children to function well culturally and economically in their own societies. They also have to prepare children to be global citizens, equipped with new skills and knowledge in order to compete in the future global market. In dealing with this expanded role, many countries are no longer content with their own practices but look over their shoulders, trying to transplant good ideas and exercises from other countries in an attempt to improve their own educational standards. This phenomenon is particularly manifest in Western countries, like the UK, and in the countries of the Pacific Rim, like Taiwan, which is vividly described by Reynolds (1997) as existing "in a second phase of East-West interaction, in which both groups of countries are attempting to generate a 'blend' of their traditional practice with that from abroad."

In both Britain and Taiwan, primary schooling is currently undergoing a blending process through educational reforms. Apparently, the changes in educational structures and policies display ideologies that conflict with those held by teachers. Although teachers' attitudes may not be changed overnight, their practice is inevitably affected to some extent, and in ways that may influence their agendas for visiting museums and their museum usage. Thus, in order to more pertinently depict current teaching in both schooling contexts, this thesis has to first consider the traditional ideas and beliefs held by teachers. Furthermore, it has to also consider how changes in educational structures may condition teachers' application of these ideas or, on the other hand, how teachers' traditional conceptions may mitigate the impact brought by reforms. Such considerations will be applied to the discussion of the case studies of England and Taiwan that follows.

2.4 Teaching in Primary Schooling ---The Case Study of England

2.4.1 The Current Context

English primary schools have been famous for being pioneers and advocates of progressive education since the beginning of the 20th century (Broadfoot et al., 1993: 25). In practice, the considerable autonomy for schools and teachers, the reflective curriculum responding to the interests and needs of children and the novel teaching approaches emphasising the

learning process and experiences formed the characteristics of English primary education. This became especially true after 1967 when the Plowden Report, published by the government, enthusiastically endorsed progressive education.

However, progressive education has not proceeded without obstacles being put up by those who prefer a more formal educational arrangement. In the 1970s, due to the economic crisis, the central government started to assume a more assertive role in educational policy, in terms of keeping the educational expenditure and priorities in line with the national economic policy (Broadfoot et al., 1993: 30; Baxter, 1997:28). Aside from such political influence, the effectiveness of progressive education had also been questioned by many critical publications. For example, the Black papers of 1969 attacked progressive education for encouraging “a regrettable laxity in systematic work.”⁶ Moreover, Bennett’s study of 1976 concluded that students in formal classrooms made significantly better progress in than those in informal classrooms (Bennett, 1976). Above all, the most famous debate about this educational issue surrounded a speech made by the then Prime Minister, James Callaghan, in 1976. In this speech, he suggested that the informal teaching approaches were misunderstood or misused by teachers, and therefore resulted in failing educational standards and insufficient provision of a suitable workforce for the new industrial society (Lawton, 1989: 37).

Since the 1970s, progressive education has been on the defensive against growing support for a formal style of education with central government control. The tensions between these two versions of education finally culminated in the implementation of the Education Reform Act (ERA) in 1988. The ERA was a reaction to continuing concerns about growing economic recession and supposedly falling educational standards among politicians and the public (Broadfoot et al., 1993: 14). Its impacts were on several areas, yet the most direct effect on the level of classroom teaching was the introduction of the National Curriculum and assessment work. This legislation was an unprecedented step in the history of English primary schooling (p. 25). It granted the central government the power to hold control over teachers in terms of what to teach and what will be assessed. In addition, the recent introduction (1998) of statutory hours in the teaching of basic subjects and the endorsement of the whole class teaching approach have imposed further directions for teachers to follow.

⁶ Quoted in Galton et al., (1999: 7).

For the proponents, these legal requirements are expected to raise the nation's educational quality, and by means of that, to improve the nation's economic force in the global market. On the other hand, there is a substantial amount of criticism arguing that this rapid change was an imprudent move because it merely changed the educational structures without considering the prevailing ideologies underpinning English primary schooling. The conflicting views can be clearly found among teachers. For example, while many teachers acknowledge the merits of the National Curriculum in terms of its overall framework for planning lessons (Pollard, 1996: 42; Galton et al., 1999: 180), many studies have also identified an apparent decline in morale among teachers who feel a sense of loss of fulfilment and autonomy when faced with the rigid requirements (Campbell and Neill, 1994; Alexander, 1995; Galton et al., 1999). Older teachers find it particularly difficult to submit their progressive beliefs in children's personal development to the national economic goal achieved by the prescribed curriculum and the assessment scheme (Osborn, 1997: 21).

It is this specific context in which the present study was conducted. Hence, in order to understand teaching in the current schooling context, it is necessary to first discuss the conflicting educational ideologies faced by English teachers.

2.4.2 Primary Ideology and Pedagogy

Compulsory mass schooling did not exist in England until the late 19th century. Before this legal establishment, churches had played a supportive role in educating the State's children, as the monarchy and 'the Church of England' had always been identified as virtually one and the same. Therefore, there were already a lot of church schools or other religious groups providing basic education in literacy and numeracy for the public. (Turner, 1998: 27-29; Vlaeminke, 1998: 15-16). However, along with the coming of the new industrial society, the State became aware that these churches and charitable organisations could no longer provide education on the scale necessary to train and control the masses. Legal educational provision was then established in 1870 (Broadfoot et al., 1993: 25; Vlaeminke, 1998: 15-22).

It is this specific context in which the system of English primary schools originated. In this era, primary schooling was much influenced by two ideological strands, those of economic utility and Christian beliefs. In this context, school education was "specifically and deliberately, for the one section of the society only – that is, for the working class" (Galton,

Simon and Croll, 1980: 30) who needed to be equipped with basic skills but did not have to be knowledgeable. In addition, children also needed to be sufficiently disciplined and docile in order to work in industries. The latter demand fortunately coincided with the religious assumptions that children are innately bad and amoral so they need to be strictly controlled and disciplined (Vlaeminke, 1998: 15-22). Such a view was asserted in one Victorian school: “the primary object of early education is to cultivate religious principles and moral sentiments; to awaken the tender mind to a sense of its evil dispositions and habitual failings.”⁷ Reflecting these economic and religious ideas, teaching in Victorian schools mainly focused on the basic “four Rs” subjects---reading, writing, arithmetic, and religion, and rarely on other subjects. Teaching styles were mostly characterised as authoritarian, harsh and with an emphasis on mass instruction and rote learning (Vlaeminke, 1998: 16).

However, this kind of utilitarian and rigid education was attacked from the turn of the 20th century. For example, Edmond Holmes, an ex-Chief Inspector of the Board of Education, criticized this approach by saying that “blind, passive, literal, unintelligent obedience is the basis on which the whole system of Western education has been reared.”⁸ In reaction to this stultifying and uninspiring schooling, progressive education was then advocated. Its growth was soon fostered by some enthusiastic supporters promoting and practicing progressive ideas in their local areas around England. Most importantly, its educational principles were further endorsed by several official reports published by Her Majesty’s Inspectorate, including those of Hadow in 1931 and 1933, and that of Plowden in 1967 and HMI handbooks of suggestions for teachers (Alexander, 1995: 227). The publication of the Plowden Report, described as “a progressive’s charter”, is the key event in the development of progressive education (Galton et al., 1999: 6). Its appearance successfully changed the educational ideologies in England as well as other parts of the United Kingdom. Afterwards, progressive education became part of the fabric of British primary education which, as Alexander (1995: 9) claimed, just like famous British democracy and British broadcasting, is “the envy of the world”.

The ideas of progressive education are actually a fusion of many inspirations. They emerged from different periods of time starting from the eighteenth century, were derived from different disciplines such as psychology, literature, humanism and art, etc., and related to

⁷ Quoted in Alexander (1995: 279).

⁸ Quoted in Vlaeminke (1998: 17).

various aspects of education such as cognition, affectivity, creativity and physical education (Alexander, 1995: 282-285). Despite its mixed nature, the core of progressive education is based on the belief that children are unique individuals who learn “through making his or her own physical and mental connections with the world, through sensory explorations, personal effort, social experiences and the active seeking of meanings from experiences.” (Moyles, 1997: 9)

The value of children’s individuality can be traced back to Rousseau’s (1712-1778) romantic image of children: “Childhood has its own ways of seeing, thinking and feeling: nothing is more foolish than to try and substitute our ways.”⁹ With this view, Rousseau rejected the Christian belief of human original sin but praised the natural goodness inside the child. This assumption about children deeply influenced the views of the later educationalists, psychologists and, indeed, of the Western world in general. For example, one of the most famous psychologists Piaget (1969:45) also stated: “the child is endowed with an authentic activity of its own and that education cannot succeed without truly employing this activity and extending it is something everyone has been repeating ever since Rousseau.” Based on this assumption, the aim of education is to nurture children as they are growing like delicate plants. As for teachers, their task, similar to that of gardeners, is to find the children’s ‘budding points’ as well as to provide secure environments and sufficient stimuli for them to grow.

Such an educational perspective is very child-centred, emphasising the internal needs, interests and potential of children rather than the predetermined norms or objectives imposed upon them. As for children’s learning, it is regarded as a growing process which is developed through their interaction with the environment and the people and materials within it. In other words, they are learning through experiencing the world around them. Such a view was shared and then developed by many renowned educationalists including Montessori, Dewey and Piaget.

Piaget (1896-1980) was first to establish a theory validating the assumptions underpinning progressive education. The essence of his theory is that children develop their cognitive abilities through making sense of their experiences. While they learn, their cognitive structures (schemas) develop. Significantly, this development is more than just a process of

⁹ Quoted in Alexander (1995: 278).

simply piling the new knowledge upon the existing cognitive structure, it is a reconstructing of that structure. In Piaget's account, children's cognitive development takes place through assimilation--- integrating information into the existing schema, and through accommodation--- modifying the schema to account for new experience (Roschell, 1995: 44). This theory argues that children are not passive receivers of information but active learners who construct their understanding through experience. In this sense, teachers, rather than giving direct instruction, should provide children with access to a rich and stimulating learning environment and allow them to take an active part in the pursuit of knowledge.

Piaget's theory strongly challenges the traditional educational assumption that children learn by simply being filled with information transmitted by teachers. Since its publication, his theory has powerfully reinforced the views of progressive education. Although it has lately been criticised for neglecting the social context in which learning takes place and consequently has been modified by other theories, for example, constructivism (Blenkin, 1998; Nicolopoulou, 1993; Gipps, 1994), its impact on progressive education as well as on other educational fields remains profound.

To accomplish its unconventional ideas, progressive education requires a very different style of schooling from that of traditional schools. The characteristics of this type of schooling have been summarised by Blyth (1988: 7-24) into five aspects, namely, pedagogy, curriculum, organisation, evaluation and personal style. In his account, the pedagogical emphasis in progressive education is on the child's active engagement in the learning process through educational play such as experimentation, problem-solving, exploration, guided discovery and data research. The role of teachers is to provide such a learning environment and to facilitate children's development process. As for the curriculum, its arrangement is topic rather than subject based. It should closely relate to the children's life experiences and interests. It should foster a balanced development in the child as a whole, and lead the child to appreciate and understand the knowledge in different subjects as collective human achievements. In order to encourage the informal teaching styles and reflective curriculum, the elements of organisation should be as flexible as possible, especially in terms of teaching timetables, the layout of the classrooms and school buildings, and students' groupings. As for the evaluation, since the child's development is what really matters, the evaluation requires the trained observation of the child's development process from a holistic perspective rather than final test outcomes. As for the style of teaching, teachers should foster a friendly

atmosphere in the classroom or the school to encourage the children's self-exploration and self-directed learning. Finally, as the children's individuality is highly valued, teachers should promote democratic values and minimize their social distance from their children.

This kind of schooling based on informality, flexibility and self-development was much favoured in English Primary schools before the ERA in 1988. For examples, Her Majesty's Inspectorate (HMI) report described 'characteristics of good classroom work' which were clearly in line with the progressive approach:

"In almost all cases first impressions were of an informality which typifies many primary classrooms. Closer investigation showed that freedoms were not there by chance. They had been adopted for a variety of interrelated reasons. For example, on those occasions when children were permitted to move about the classroom so that they had access to the materials they needed... that they could use reference books, they were being taught, at the same time, to select from a range of materials, to behave responsibly.... By these and other means a sense of self discipline was being nurtured ." (HMI, 1987: 32)

It is fair to comment that progressive ideas were prevalent among teachers. However, due to the informal and flexible nature of the approach, the success of its implementation was largely dependent on teachers' own experience, understanding and interpretation of its principles and ideas. With regard to this concern, it is worth noticing that Galton and Simon's study (1980) found that classroom practice did not display a pure form of progressive education but rather a phenomenon that could be described as "curriculum hybridisation". It pointed out that most of the teachers observed claimed to practice the child-centred philosophy, but in fact they also combined it with traditional ways of teaching. For example, while teachers taught children individually, they were also likely to tell children what to do in a direct way. In addition, while they used the topic work to combine several subjects, most of their teaching time was devoted to the basic subjects of English and Mathematics.

The progressive education which largely depends on teachers' skills and interpretation has been blamed for producing what seem to be patchy and falling educational standards. This supposed deficiency in education is further linked to the nation's deteriorating economy. Hence, the launch of the Education Reform Act was intended as a solution for both educational and economic problems. It provides a standardised framework for teaching and

assessment in an attempt to raise the educational quality of the nation. However, as a remedy to progressive education, the new curriculum arrangements such as the specification of teaching content, the stress put on the three basic subjects, and the formal assessment of children's attainment, is totally against the principle of child-centred approaches. For its opponents, the ERA displays utilitarian and didactic characteristics which resemble the instrumental and rigid education dating back to the Victorian times.¹⁰ No matter whether the ERA has successfully altered the prevailing progressive ideology among teachers, its mandatory requirements in terms of the National Curriculum and assessment work immediately changed the established practice in English primary schools. This point will be discussed in the following section.

2.4.3 The Structural Condition

Before the launch of the ERA in 1988, decentralisation had been the main characteristic of the English educational system for most of the 20th century (Broadfoot et al., 1993: 24-29). Despite controlling the resources and monitoring the activities of local authorities, the central government generally granted the local authorities most of the responsibilities for the running, staffing and teaching of their schools. This decentralised arrangement could also be applied to the relationship of the local authorities and their schools. In practice, primary schools and teachers were given a remarkable degree of freedom to decide on their curriculum, based on the needs of their children (p. 26-29). Such a system worked well in accordance with the principles of progressive education and was officially endorsed: the Plowden Report clearly expressed that teachers should be allowed to exercise their professional judgement dependent on the needs and interests of individual children.

In such circumstances, an individual school was entitled to plan its curriculum framework mainly based on the school ethos, that is the shared values and agreed commitments about education among the teaching staff. Within the school's curriculum framework teachers also had a great degree of autonomy to develop their teaching content so that they could appropriately reflect the needs and interests of their children. As teachers in primary schools were, and still are, responsible for teaching all the subjects to their classes, they tended to integrate most of the subjects into so-called topic work, teaching children in an interesting and

¹⁰ For example, Galton et al. (1999: 179-183) have discussed many primary teachers' negative feeling towards the National Curriculum.

holistic manner. In addition, they were generally trusted to make decisions about their own teaching approaches and strategies so that they could properly accommodate the children's individual learning.

However, the autonomy the English primary teachers used to be granted has been significantly reduced since 1988. The National Curriculum has set out a legal framework of teaching and assessing students' attainments for all compulsory state schools in England and Wales for students aged from 5 to 16. Within this age range, students are then divided into four key stages. Those children at the primary level are allocated into either Key Stage 1, in which children are aged 5 to 7, or Key Stage 2 in which they are aged 7 to 11.

The curriculum framework consists of three main elements, that is, 'subjects', 'programmes of study' and 'attainment targets'. Specifically, the primary curriculum is divided into ten subjects including three 'core' subjects--- English, Mathematics and Science, and seven foundation subjects, including History, Geography, Design and Technology, Information and Technology, Music, Art and Physical Education. Each subject is then subdivided into 'programmes of study' detailing what children should know, be able to do and to understand at the end of the course of teaching. Furthermore, the programmes of study are closely associated with the 'attainment targets' which describe the levels and characteristics of performance that children should have achieved by the ends of Key Stage 1 and 2.

Nevertheless, when children reach the ends of these two stages, they have to be formally assessed by 'Standard Assessment Tasks' for three core subjects--- English, Mathematics and Science. In addition, the results of these assessments will be published as league tables of aggregated school performance for the public. The production of the league tables is further associated with two other educational reform acts. First of all, the reforms permit parents to choose preferred schools for their children by providing them with league tables, representing the accountability of schools and teachers. Secondly, while the parental preference is permitted, the school's budget is then largely subject to the number of students enrolled after the ERA. These sequential acts have created additional pressure on teachers. They not only have to implement the new requirements in their profession, but also have to be concerned about the school funding, because it is now largely subject to schools' accountability as shown in the league tables.

The ERA has changed the classroom practice remarkably and brought the teachers tremendous workload and pressure. Its appearance immediately attracted severe criticisms and complaints from teachers and other sources such as educational professions and the media. Hence, the curriculum and the assessment framework introduced in 1989 was modified twice respectively in 1995 and 2000. Although the basic subject framework in the new curriculum has largely remained the same, the prescriptions of the content have been reduced and the means of the assessment have been simplified. The new curriculum (2000) also gives teachers' flexibility in planning what to teach, according to the programmes of study of the curriculum, in six non-core subjects¹¹ as well as increasing their autonomy by suggesting 20% of time to be free from the National Curriculum for flexible use. Despite this considerable release for teachers, the government has recently required primary schools to teach English and Mathematics at least two hours per day.¹² In addition, new teaching approaches such as whole class teaching, are very much encouraged as part of the national's education policy.

Undoubtedly, all these changes in educational structures have attracted a lot of research into their impact on teachers and classroom practice. So far, several major studies (Pollard ed., 1994; Alexander, 1995; Galton et al., 1999) have recognized many changes affecting teachers in areas such as curriculum planning, classroom management, teaching methods and assessment work. However, despite the immediate changes resulting from the shift of educational policy and structures, these studies have asserted that there exists a remarkable continuity which has maintained the stability of primary schooling as it was. For example, the survey made by HMI (OFSTED, 1993), shows that although there was a noticeable shift towards a greater focus on single subject teaching, the vast majority of primary schools still remained firmly committed to grouping different subjects into topics or themes to be taught. Furthermore, the beliefs that children should learn by doing and that teaching should have a practical bias were still prevalent among the school principals and teachers (OFSTED, 1993: 8). Alexander's study (1995: 288) also claimed that the outward features of progressive education are still dominant in today's classroom, for example, the emphasis on display, the abundance of materials and apparatus to encourage learning through experiencing, the commitment to topic work and the preference for teaching several subjects simultaneously.

¹¹ The six subjects include Design & Technology, History, Geography, Art, Music and Physical Education. See National Curriculum (2000).

¹² A daily literacy hour and a numeracy hour were respectively implemented in 1998 and 1999 by primary schools.

This mixture of change and continuity best describes the current state of English primary schooling. The combination may partly result from the teachers' personal interpretations of the new educational policy and requirements. As explained earlier, many teachers still hold progressive beliefs even though they are imposed upon by the new educational ideas. Thus, when faced by the new curriculum arrangements, they tend to interpret and implement them in their own ways, while at the same time, trying to retain their previous practices in other areas of classroom life. This suggestion is consistent with the theory of curriculum hybridisation. In their recent study, Galton and his colleagues (1999) also use this theory to describe current primary schooling. The study concludes that the recent changes are merely teachers' pragmatic responses; they either simply adopt the innovations without adjusting their attitudes or bolt the new changes on to their old practices. In other words, all these changes only occur at the superficial level because at a deep level, primary education in terms of the ideological system to a large extent still maintains the same.

Alexander (1995: 289) also uses the hybrid model to portray and evaluate current English primary education: "the hybrid model...highlights continuity rather than transformation, conflict, paradox and dilemma rather than consensus, and it invites a more cautious evaluation of what has been and what might be achieved because of the inertia thus generated." This suggestion is well illustrated by examining the current situation in English primary schooling: it is indeed very complex, with a mixture of contradicting ideas and practices and a mixture of changing and continuing processes. Thus, a narrow scope in examining teaching in current primary schooling seems to be insufficient to understand the complexity. A broad perspective is therefore employed in this study to discuss the ideas and structures, the past and the present, and the change and continuity of the system in which teachers' teaching practice, including the ways of using museums, is formed and shaped.

2.5 Teaching in Primary Schooling---The Case Study of Taiwan

2.5.1 The Current Context

It is fair to suggest that Confucianism has been the primary influence on forming the characteristics of contemporary education in Taiwan. Since the government of the Republic of China withdrew from Mainland China to Taiwan in 1949, it has made deliberate efforts to promote Confucian ethics through education to maintain the continuum of the traditional Chinese culture (Smith, 1991, 1997; Young, 1995; Wu, 1997). As a result, under the

influence of Confucianism, a strong emphasis on collectivism has helped strengthen social stability. Most importantly, the great value placed on education further boost the nation's economy. According to the World Bank's study (1993: 52-53), education was by far the single most important contributor to the predicted economic growth rate of Taiwan between the period of 1960 to 1985.

In addition to this contribution to social stability and economic prosperity, Confucian values in education have also created the nation's outstanding academic performance. For example, according to the Educational Testing Service which examined thirteen-year-olds of twenty countries in mathematics and science in 1991, the average score of Taiwanese students in science ranked second, and their average score in mathematics ranked at the top along with that of students from South Korea (Wu, 1997: 195). In two other cross-national studies in 1980 and 1987 conducted by Stevenson and Stigler (1992), Taiwanese students in the first and fifth Grade also did well in their mathematics scores, with a relatively small variation in the students' test outcomes. Furthermore, in a more recent review of the international surveys of educational achievement in mathematics and science dating from 1960 and 1990, Taiwan displayed consistently outstanding performances, which impelled the researchers to further analyse the reasons behind its academic success (Reynolds & Farrell, 1996).

Although Taiwan's educational achievement has gained international renown, its educational practices, which emphasise conformity and conventional authority, have also been the cause of many defects. In brief, the aspects criticised include the tight centralised control of education, intensive academic competition, test-oriented teaching, and the overuse of lecturing and rote learning. Among these shortcomings, the inordinate importance placed on examinations calls for immediate attention. The pressure to do well in examinations, which even starts when children enter kindergarten, has been criticised for severely depriving students of normal lives and balanced personality development (Sharma, 1997a; Smith, 1997; Lew, 1998). Preparation for examinations based mainly on rote memorisation of textbook knowledge has further inhibited students in developing their creativity and critical thinking. It is foreseen that these latter skills, rather than the successful accumulation of knowledge, are in urgent demand for the information-age economy and the more democratic society Taiwan is marching towards.

During the 1990s, in response to the educational problems and needs of the shifting society, the government launched a series of challenging programmes for the educational reform. The main efforts of this reform, according to the Council on Education Reform, have been to enhance the individual's educational needs as well as to increase flexibility in the centralised educational system.¹³ Its scope involves all levels of schooling, from pre-school to post-graduate education. In addition to formal schooling, for the coming information-age, the reform has also been promoting informal education by encouraging learning in museums, cultural centres, libraries and community colleges (Ministry of Education, 2001). In other words, the educational reform is assumed to be an ambitious project which aims to change not just educational structures, but also to transform Taiwan's traditional educational paradigms into a modern profile (Dan and Chu, 1988).

As the reform is such an enormous project requiring a prolonged and ongoing process, changes have gradually been introduced since the 1990s. At the level of primary education, several changes have been made while some innovations are still on trial or waiting to be introduced. By the time of this study, the important changes which have been made so far include: a reduction in class sizes (1993), an increase in programmes for teacher training (1995), the implementation of the revised National Curriculum (1996, 2001), and the replacement of the uniform textbooks compiled by the Ministry of Education with approved private publications (1996). In addition, new approaches such as interactive teaching and multiple methods of assessment are also encouraged as part of the new educational policy.

At the time of this study, the reform has been ongoing for a while and has brought some considerable changes. Therefore, like the hybrid model suggested by Alexander and Galton, current primary schooling in Taiwan is a mixture of tradition and innovation. However, the changes made so far seem to be merely amendments to existing practice rather than rapid transformations (as will be revealed in a later discussion). Therefore, the overall features of schooling are still displaying an apparent Confucian tradition as also evidenced in other studies subsequent to the reform (Sun, 1995; Young, 1995; Sharma, 1997a, 1997b; Smith, 1997). As far as teaching is concerned, it is predictable that any substantial and profound change brought about by the reform may not be achieved immediately. This is because, for centuries, Confucianism has not only been an educational ideology, but also a way of life

¹³ Source is from Internet: http://gio.gov.tw/info/yearbook/f_html/ch17_2.html#ch17-0 (accessed November, 1997)

deeply ingrained in every aspect of Chinese society, including Taiwan. Thus, before looking at any impact the reform will have in the future, it is first necessary to analyse how the ancient Confucian legacy influences the present educational practice in Taiwan.

2.5.2 Primary Ideology and Pedagogy

Historically, Taiwan has been considered a territory of China for nearly one thousand years. Following the defeat of China's Qing dynasty in 1895, Taiwan was colonised by Japan. The Japanese control continued until 1945 when victory over Japan in World War II meant that the island was returned to China. Soon after that, civil war between the Nationalists and Communists in China followed, with the defeat of the Nationalist government in 1949 resulting in its retreat from the mainland to Taiwan. Due to the recent release of Taiwan from Japanese colonization, the whole society was unstable and lacked a cultural conformity. In order to reconstruct the society and to reinforce ties with Chinese culture, the Nationalist government made deliberate efforts in developing education and promoting Confucianism as its cultural orthodoxy (Smith, 1991; 1997). It is this unique historical and political context in which Taiwan's current education paradigm is formed and shaped.

Confucianism has been the predominant ideology in Chinese society for more than 2,000 years. It is a philosophy developed by Confucius, who synthesized the essence of ancient Chinese culture and turned it into a rational thinking system about 2,500 years ago (Smith, 1997: 48). Although Confucianism is a philosophy concerning the multifaceted aspects of man and life, its final goal is to achieve an ideal world, and this ambition can only be achieved by education. Therefore, the cardinal ideas of Confucianism always revolve around education.

Born in a chaotic era when China was fragmented and suffering from frequent civil wars, Confucius yearned for a society that was harmoniously structured and ruled. As a great teacher himself, Confucius firmly believed that education was the best means to achieve this. In his blueprint, this ambition can be accomplished through the following stages: firstly, by studying the aspects of life that are sincere, beautiful and harmonious, one's behaviour can be cultivated and spirits can be lifted. Consequently, one can influence surrounding people and change them for the better. Step by step, a peaceful and harmonious society can then be created (Chan, 1973: 84; Smith, 1991: 18). Such a belief was clearly expressed in his study,

The Great Learning:

*"The Way of learning to be great consists in manifesting the clear character, loving people and abiding in the highest good. Only after knowing what to abide in can one be calm. Only after having been calm can one be tranquil. Only after having achieved tranquillity can one have peaceful repose. Only after having peaceful repose can one begin to deliberate. Only after deliberation can the end be attained. Things have their roots and branches. Affairs have their beginnings and their ends. To know what is first and what is last will lead one near the Way... When things are investigated, knowledge is extended; when knowledge is extended, the will becomes sincere; when the will is sincere, the mind is rectified; when the mind is rectified, the personal life is cultivated; when the personal life is cultivated, the family will be regulated; when the family is regulated, the state will be in order; and when the state is in order; there will be peace throughout the world."*¹⁴

This clearly indicates that Confucius' ultimate goal of education was more than the maximization of an individual's potential but the establishment of a peaceful and well-regulated society. Therefore, Confucius' main pedagogical concern was how to cultivate a learner into a decent gentleman who properly functions in the society.¹⁵ On this premise, what Confucius really wanted to teach his students was not the conventional definition of knowledge, such as facts or information, but the transcendental values in terms of virtues, human relationships and social order, which his ideal world consisted of. Accordingly, personality cultivation and ethical guidance were always the main objectives of Confucius' teaching.

For the purpose of cultivating personality, Confucius believed that learners could be purified and inspired by studying elegant and solemn artistic and ritual activities. Therefore, Confucius designed his subjects of teaching to consist of the six arts derived from ancient civilization, namely music, mathematics, drawing, calligraphy, archery and ethics (called Li, and literally meaning ritual, etiquette and law) (Smith, 1991:19). As well as personality cultivation, ethical guidance was another essential area of his curriculum. After class, he frequently advised his students on how to behave appropriately. In Confucius' view, appropriate behaviour is subject to an individual's ascribed role defined by an ordered society. In this

¹⁴ Quoted in Chan (1973: 86-87). Confucius left no written records. However, his ideas and words were recorded by his students and their students as books including *The Great Learning*, which is often regarded as a Confucian Classic. See Chan (1973: 84-85).

¹⁵ Before the 20th century, it had been a norm in the Chinese society that only men have right to education.

sense, learners should be taught what their roles are, together with the corresponding responsibilities and manners to conform to the standard model of behaviours expected by society (Pratt, 1992: 302). Among all of the expected behaviour, filial piety (xiao) and obedience to a superior (shun) are considered the most fundamental and prominent virtues in the Confucian tradition. These two characteristics in particular are therefore reinforced in the process of education and child rearing (Wu, 1996: 23-24).

As far as learning is concerned, rather than recognising the different abilities of individuals, Confucius believed that the nature of all human beings is basically the same, and the separations between them are mainly due to practices in later life. Confucius made this belief clear by saying: "By nature, men are nearly alike, by practice, they get to be wide apart."¹⁶ It should be clarified that although Confucius claimed that the nature of all human beings is nearly the same, this does not mean he naively thought that everyone is born with equal ability or competence; he believed rather that the innate ability is malleable by the environment, so it is unnecessary to stress this aspect. Instead, what he thought was really crucial is the learning environment which he saw as having a determinative influence on a learner's development. As he said: "He who practices what is not good becomes the mean man, and he who practices what is good becomes the superior man. In this connection, we should be careful in selecting either friends or neighbours for the influence of environment is very strong".¹⁷ Based on this assumption, Confucius considered that the priority of successful learning is cautiously to choose a learning environment full of good examples, such as teachers, friends and books. Accordingly, a student can learn through modelling these examples---imitating the good behaviour displayed and memorising the correct information as instructed. By means of diligent repetition and practice, a learner can eventually form habits and internalise the information.

Consistent with the belief that education is the cornerstone for an ideal society and everyone can be improved by education, Confucius proposed 'education without discrimination', meaning that all men should have a fair opportunity of education regardless of their social class.¹⁸ This concept of equality in education is perhaps the most important and enduring value of Confucianism. As Smith points out, before Confucius, China was ruled by the

¹⁶ Quoted in Smith (1997: 52).

¹⁷ Ibid.

¹⁸ However, the fair opportunity for education only applied to men, not to women.

aristocratic elite. The Confucian view that all men are entitled to have an equal chance to succeed in education led to the development of an open and fair examination system. Throughout two thousand years in Chinese history, government officers have been selected through examinations.¹⁹ This view created an open opportunity for the common people and therefore enhanced social mobility. It also meant that China could therefore retain a relatively high degree of social stability compared to other countries which suffered from social conflicts caused by caste or class structures (Smith, 1991: 56).

As Confucianism espouses social conformity and personality enhancement, it has been keenly advocated by the later politicians and enthusiastically studied by society throughout Chinese history. Its ideas have deeply penetrated the lives of Chinese people and become the paramount component of Chinese culture. Its influence goes beyond the land of China and also includes Taiwan, Singapore and Japan which display “Confucian heritage” cultures (Biggs, 1996: 147). Although Confucianism has been widely studied, it is necessary to point out that, like interpretations of any philosophy, Confucius’ original ideas may have been eroded by time and coloured by his followers, and thus may lead to misapplication.²⁰ It is therefore argued that Confucius’ ideas should not be blamed for today’s educational defects such as the overreaching examination system or an absence of creativity among the young (Smith, 1997: 54). Furthermore, it has also been suggested that Confucianism cannot be the only explanation behind Chinese culture since it has also been influenced by other philosophies such as Taoism and Buddhism, together with some western ideas since the last century (Lau and Yeung, 1996). Having said this, Confucianism is still regarded by most researchers as the predominant ideology which characterises Chinese education. These researchers include Howard Gardner, who has conducted a field study in China and Taiwan.²¹

Among the educational practices under the Confucian influence, the collective orientation is the most obvious attribute. Based on the Confucian view that the ultimate goal of education is to develop a society, the function of education is therefore to train learners to become useful to the society rather than to allow them to express their individuality. A famous Chinese adage: “one must sacrifice one’s ‘small self’ (xiaowo) in order to achieve the ‘large self’

¹⁹ The examination system is still one of the main channels for selecting government officers in Taiwan today.

²⁰ For example, Confucius did state that teaching should be based on a learner’s ability and character. However, this aspect was often neglected as his later followers stressed the conformity rather than individuality. Consequently, this part of Confucianism is not often applied in Chinese education.

²¹ See Gardner (1989), *To Open Mind: Chinese Clues to the Dilemma of Contemporary Education*, New York, Basic Books.

(dawo) --- the collective”, reveals the ingrained ideology of collectivism in Chinese thought. Therefore, it is justifiable for the government to control an educational policy that prioritises national welfare over individual development, and to govern all affairs of education. This centralised system not only operates in communist China, but also in Taiwan, a nation proud of its democratic progress. For example, according to the Constitution (1947), the purpose of the Taiwan’s education is specified as follows:

“The purpose of Chinese education is to improve national living, to achieve mutual assistance, to develop national economic life and to prolong the life of the nation, so that we can attain, by all means, the independence of the nation, democracy and a higher standard of living, and in the end, advance to an ideal world where harmony and equality prevail.”²²

Such a strong inclination to collectivism determines the aims and agendas of schools. It results in a kind of schooling that is contrary to western education, which values individualism. This contrast is well illustrated by Cortazzi (1998: 210) as follows: whilst British teachers may teach the topic ‘People who help us’, Chinese teachers would teach the topic as ‘People who help others’ or ‘How we can learn from people who help others’; whereas British teachers are highly aware of individual needs and development, Chinese teachers are more concerned about collective goals, including those of classroom work and social behaviour.

A sense of collectivism is deliberately fostered in children at a young age. For example, Tobin, Wu and Davidson’s study (1989) indicates that the promotion of collectivism lies at the core of the Chinese pre-school mission. For example, it is clearly written in a kindergarten manual for teachers:

“In the kindergarten we use the classroom as a big family to teach single children that they are members of a collective. We teach children to develop the habit of treating others equally, to be friendly, considerate, concerned, to mutually give in (qian rang) to others, and to obey the rules of the group.”(p. 105)

²² Quoted in Smith (1991: 6).

In the study, the kindergarten children were doing almost everything together, even including going to toilet. Stevenson and Stigler (1992) also suggest that the most profound difference between Chinese and American students is in how they spend their time in school. Their study concluded that American children spend most of their school time learning alone whereas Chinese children are often working as a unit with a teacher as leader (p. 63-65). The above studies demonstrate that collectivism extends into every aspect of schooling, influencing both habit forming and academic learning.

As everyone is expected to achieve a collective congruence, a standard model needs to be elected. The centrality of models is the concomitant of collectivism and is another characteristic of Chinese education. As far as learning is concerned, Confucianism assumes that the nature of human beings is malleable, which like clay can be modelled by external forces. In this sense, children learn best by being exposed to good models. As one Chinese proverb says: "The one who is near red pigment becomes red, near black pigment becomes black."

Accordingly, a teacher's responsibility is to create a disciplined and well-regulated environment, a model of the Confucian ideal world, in which children can thereby form habits of learning. This belief underpins all the actions of Chinese teachers in terms of controlling, governing and monitoring, in an attempt to create an orderly environment that enables children to concentrate on learning. However, researchers have reminded us that the strict management displayed by Chinese teachers should not be misinterpreted as harsh or indifferent to students, but as a Chinese expression of care and concern for the benefit of children (Tobin et al., 1989: 93; Wu, 1996: 13).

Apart from the impact of environments, teachers acting in the role of models for imitation also have a profound influence on children. According to Cortazzi and Jin's study (1996), Chinese students expect their teachers to have a moral character which is worthy of imitation. A deep subject knowledge is the foremost expected quality of a good teacher. Comparatively, other pedagogical skills such as an ability to arouse interest or the use of effective teaching methods, are much less mentioned by students (p. 187-188). Pratt's study (1992) also displays a similar result. It concluded that Chinese teachers are normally assumed to be the experts in a content area, so that teachers regard their responsibility to be that of conveying a body of knowledge to learners, with little attention paid to individual

differences or students' motivation (p. 313). The ideal pedagogy for Chinese teachers is to display their competence in a clear and systematic manner so that children can learn effectively through imitation --- precisely following teachers' instruction, carefully observing their behaviour and then diligently practicing what they have seen or been told.

The concept of modelling is the basis of many approaches of Chinese pedagogy, including authoritarian instruction, repeated demonstration, habit training and rote learning, etc. This concept can also explain the text-centred approach favoured by Chinese teachers because textbooks are often regarded as one form of model. In addition to modelling teachers' instruction, students are expected to deeply study and memorise the content of textbooks in order to internalise it (Cortazzi, 1998: 211). The extreme value placed on books is explicitly reflected in the Chinese language. For example, a common expression for 'teach' in Chinese is Jiao Shu, which literally means 'teach books', while a frequently used expression for 'study' is Du Shu, which means 'read books'. Since books play such an important role in Chinese people's learning, it is claimed that "no other materials can replace them" (Chen, 1998: 494). Such an attitude inevitably affects the Chinese view of educational methods other than learning from books. For example, if an activity for children, even for those at a kindergarten age, involves playing or having fun, parents would not usually regard it as learning and would prefer it to occur less often in school (Chen, 1998: 493).

An overwhelming emphasis on academic achievement is another by-product of Confucianism. In Chinese society, educated people, often regarded as role models, are highly respected and honoured. In addition, for centuries, the examination system has always been the main mechanism for selecting the state's officers. Education is thus considered as the ladder for advancing one's social class. As a Chinese old proverb says: "All jobs are low in status, except study which is the highest." (Hau and Salili, 1996: 128).

Although education is regarded as important in most societies, relatively speaking, Chinese people put a stronger emphasis on schooling, and on academic achievement in particular. This tendency appears in Chinese children at a young age. For example, in a cross-cultural study of the attitudes of primary school children, it was found that Chinese children consider getting a good education as a central goal in their lives. Furthermore, Chinese children in general liked schools more than their American counterparts did. In addition, when they were asked to make wishes, Chinese children often mentioned about education related wishes

(e.g. books, grades, passing exams, entering university), whereas American children tended to have more material wishes (e.g. money, toys, pets, fantasies) (Hau and Salili, 1996: 128-129). The keen emphasis on academic achievement cannot be developed without the support of a firm belief that everyone is malleable and thus has potential to succeed in education. Therefore, children are taught that academic achievement is under their personal control and they should pursue excellence through their own endeavours. Much research has indicated that Chinese parents play an important role in imparting this belief to children, and hold high expectations of their children's academic performance. One of the famous examples is from the study carried out by Stevenson and Stigler (1992). Their international survey found that less than 5% of Taiwanese mothers and Japanese mothers, compared to 40 % of American mothers, said that they were satisfied with their children's performance at school. The dissatisfaction of Taiwanese mothers is not limited to the measurement of their children's achievement, but also extends to the schools' performance. In comparison with 91% of American mothers who said that their children's schools were doing a good or excellent job, only around 40 % of Taiwanese mothers rated their children's schools as favourably (p. 114-116).

Stevenson and Stigler interpret the low satisfaction among Taiwanese mothers to be the result of them holding high standards for their children and schools, therefore, both schools and children work hard to meet parents' demands (p. 123). It may also explain why Taiwanese students spend an exceedingly high proportion of their time outside school on homework, estimated to be seven times that spent by American children (p. 55). Chen and Uttal's study (1988) also shows the high expectations Chinese parents place upon schools and teachers. According to the study, 66% of Chinese parents, compared to only 19% of American parents, believed that teachers are more important than parents in influencing children's learning, and only one Chinese parent thought that parents play a more important role than teachers (p. 356). The studies once again demonstrate the high position of teachers in Chinese culture. With such high expectations, there is no doubt that Chinese teachers are constantly working under the scrutiny and demands of parents.

2.5.3 Structural Conditions

The rooted ideologies underpinning Chinese education as discussed are explicitly manifested in Taiwan's educational system. As the core of the Confucian tradition is conformity,

education in Taiwan is highly centralised. For the purpose of achieving a collective goal, teaching practice is to a great extent constrained by educational structures imposed by the government. All nationwide affairs of education are controlled by the Ministry of Education (MOE). Its responsibility not only covers formal schooling (including both public and private schools) but also social education (including museums, libraries, cultural centres, etc.). Under the direction and supervision of the MOE, the Bureau of Education in each municipality or county (city) is then in charge of its local education. Under such a centralised control, primary schools in Taiwan “are programmed to be the same, can be expected to have nearly identical learning environments and curricula” (Smith, 1997: 83).

Down to each individual school, the central control is exercised through a clearly structured administrative system that ensures the MOE’s policy is effectively executed (Figure 2.2). In this system, a principle designated by the educational authority is the head of each school and is in charge of administrative offices which supervise teachers and cater for various school affairs. Specific obligations are stipulated for each office in order to reduce any uncertainty about their responsibilities (Mao and Bourgeault, 1991: 74). Taking the Office of Pedagogy as an example, its tasks concern the general affairs of teaching and learning which include managing student registration for classes, planning timetables and schedules for teaching, providing teaching materials and aids, setting up programmes for academic assessment (such as examinations), and arranging extra curricular activities, etc. In this way, teachers’ overall practice in schools is controlled and monitored in order to achieve a collective goal.

Apart from control of the administrative system, teaching of compulsory education²³ in primary and junior high schools is further dictated by the National Curriculum and prescribed teaching materials such as textbooks (Wen, 1992; Sun, 1995). These areas have always been the major concerns of the MOE, whose intentions are clearly stated in its official publication:

“The Ministry of Education realises that curriculum, instructional materials and equipment are inter-related and necessary components of the educational process. It has prescribed specific standards for curriculum, instructional material and equipment for schools under its jurisdiction.” (Ministry of Education, 2001: 25)

²³ Taiwanese students have to receive nine years of compulsory education which consists of six years of primary education for students aged 7-12 years old and three years of junior high school education for those aged 12-14 years old.

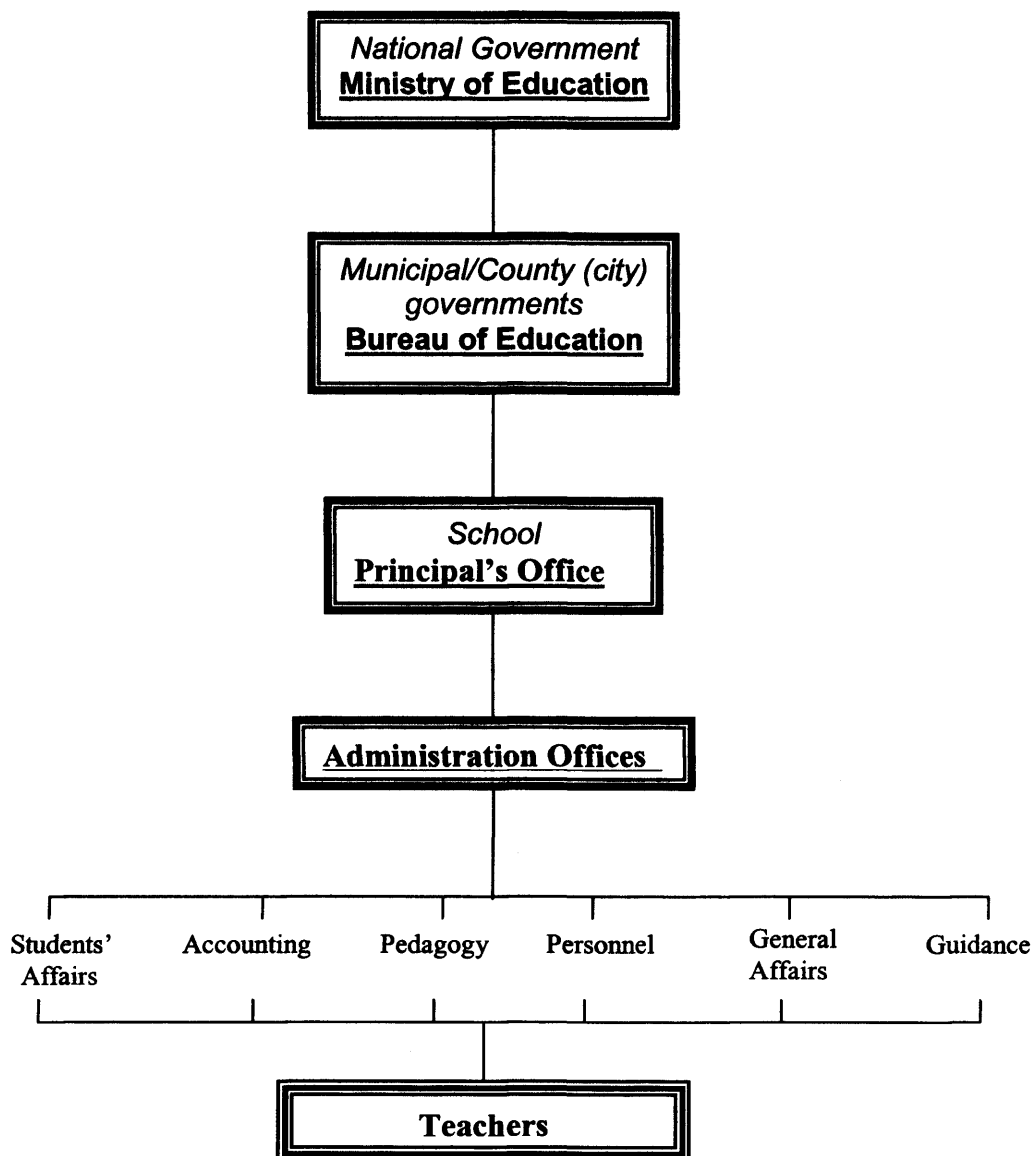


Figure 2.2 Centralised Educational System in Taiwan

Source adapted from Smith (1997:108)

At the primary level, the National Curriculum prescribes subjects for teaching and their respective statutory teaching time (see Table 2.1). More specifically, each subject has detailed requirements for teaching objectives and content. To further complement the curriculum, the MOE also compiles and provides uniform textbooks and relevant teaching materials, including guidance manuals for teaching and designing activity, reference materials and student practice books etc. The purpose of such control is to ensure a certain standard of teaching and learning. However, it has inevitably narrowed the attentions of both teachers and students down to the knowledge in textbooks. As a consequence, teachers are criticised for being like retailers whose job is merely to distribute the designed product (knowledge in textbooks) to students (Wen, 1992: 51).

Responding to the criticism, recent educational reforms have introduced certain remedies as an attempt to loosen the control. For example, the revised curriculum in 1996²⁴ granted teachers at least one lesson a week for flexible use. Furthermore, a new subject in the curriculum--- Native Art Teaching Activities,²⁵ allowed teachers to design their own teaching materials according to the local characteristics of their schools. In 2001, a new curriculum alignment was implemented. One of the big changes of this new curriculum was that the previous eleven subjects in the curriculum have been integrated into seven study areas, that is Language (integrating subjects of Mandarin, English and Native Language), Mathematics, Natural Science and Technology, Social Studies (integrating subjects of Social Studies and Native Art Teaching Activities), Health and Physical Education (integrating subjects of Health Education and Physical Education), Arts (integrating subjects of Fine Arts, Music), and Extra-curricular Activities (integrating subjects of Group Activities and Guidance Activities). In addition, the curriculum (2001) also allocated 20% of class time for flexible use. By integrating similar subjects into one study area and granting teachers more time for flexible use, this new curriculum aims to give teachers more autonomy in planning their lessons by responding to the needs of their classes.

It was predicted that the new curriculum (2001) would have a great impact on teachers and students. However, as it has only been implemented from Grade 1 in primary schools in 2001, its full impact is yet to be evaluated.

²⁴ The curriculum was revised in 1993 and its implementation began in 1996.

²⁵ The subject involves introducing activities, art works, productions that represent the culture of a local area.

Subject	Primary School					
	GRADE	GRADE	GRADE	GRADE	GRADE	GRADE
	1	2	3	4	5	6
Civics & Ethics		2	2	2	2	2
Health Education						
Mandarin		10	9	9	9	9
Mathematics		3	4	4	6	6
Social Studies		2	3	3	3	3
Natural Science		3	4	4	4	4
Physical Education		2	3	3	3	3
Music		2	2	2	2	2
Fine Arts		2	3	3	3	3
Group Activities			1	1	1	1
Guidance Activities			1	1	1	1
Native Art Teaching Activities			1	1	1	1
TOTAL		26	33	33	35	35
	<i>Unit: weekly hours</i>					

Note: Since 2001, 1st grade in primary school implemented the new curriculum alignment

Table 2.1 Teaching subjects and weekly teaching time in primary schools in Taiwan

Source adjusted from the Ministry of Education (2001: 26)

Apart from changes in the curriculum, in 1996 the MOE also approved the compilation of textbooks by bookstores. This gave schools the choice of different versions of textbooks compiled by publishers instead of relying on official ones by the MOE. However, all these publications still have to follow the National Curriculum and have to be screened and approved by the MOE.

Teacher training is another area in which the government exerts its control over teaching in primary schools. As teachers are considered to play a pivotal role in education and are seen as the main vehicle of conveying national policies, they are trained as civil officers who enjoy numerous welfare schemes and high social status. For example, there are nine colleges, all established by the government, for training primary school teachers in Taiwan. In order to enter these colleges, students have to pass competitive public examinations. Once they enter the colleges, students are offered special benefits such as tuition waivers, free meals and

living accommodation, as well as subsidized books and clothing. After they obtain teaching qualifications, their status is equivalent to that of civil officers but their remunerations are higher than those of civil officers with similar qualifications. Furthermore, qualified teachers are also entitled to many benefits such as exemption from income tax, free insurance plans, health packages and pensions (Wu, 1997: 193-194). Such a policy, on one hand, has encouraged the best candidates to enter and remain in the teaching profession. On the other hand, it allows the government to control the process of selection, training, employment, assessment and promotion of teachers. Critics suggest that, under such circumstances, teachers are cast in the role of government messengers and become passive in order to maintain their positions in the bureaucratic system:

“Teachers are used to obeying rather than questioning; to hiding individual queries and puzzles rather than expressing themselves authentically. Accordingly, they have learned that to conform with, not to questions, all orders of the government or administrative powers will lead to keep their position and being promoted, through keeping a harmonious relationship with the principle and the government” (Wen, 1992: 53).

The government's tight control over teacher training has been moderated to some degree as a result of the educational reform. The reform (1993) started to gradually reduce class sizes in order to enhance learning quality for each individual.²⁶ As the number of students in each class was reduced, the number of classes increased and thus an increased supply of teachers was in urgent demand. As a result, the government (1995) opened the channels of recruitment, allowing other colleges or universities to offer teacher-training programmes too. By admitting people trained by different institutions, this innovation is also expected to diversify the culture of schooling in terms of the composition of teachers and teaching methods. However, this expectation may be only partly achieved because once people from diverse backgrounds are enrolled as teachers, they become the government's employees and so are still subject to the government's dictation.

Another important aspect which may also condition teaching is the pressure brought by the competitive examination system. Following the tradition of the civil service examinations which have dominated Chinese society for more than 2000 years, the entrance examination

²⁶ The ultimate goal of the reform is to achieve 30 students per class. According to the MOE's (2001: 33) statistics, the average number of primary students per class was reduced from 38.87 in 1993 to 30.84 in 2000.

system is also a device for selecting students to attend higher educational institutions. There were two unified entrance examinations in Taiwan, one was for students who had completed their compulsory education at age 14 and wanted to enter senior high schools, the other was for students who wanted to enter colleges or universities. For passing these exams, students had to frequently practice formal, informal and mock tests. The intense examination culture, described as Academic Darwinism (Smith, 1997: 2) or more frighteningly by the use of the term 'exam hell' (Sharma, 1997a), has been attacked for distorting the fair function of education and impeding children's sound development. It has become the biggest problem the educational reform aims to tackle. As a consequence, it was decided that the entrance examinations for senior high schools would be abolished in 2001, and would eventually be followed by the abolition of examinations for colleges and universities.

Before the implementation of this policy, relevant recommendations were made in order to smooth the path of rapid change. For example, schools and teachers have been encouraged to reduce the number of examinations and to use multiple methods of assessment, such as reports or performance appraisals, to replace traditional written tests. Furthermore, new ideas such as child-centred learning and interactive teaching have been promoted in an attempt to replace teacher-centred and text-orientated practice.

In addition, an "Experimental No-Examination Model for Junior High Schools" was launched in 1991 in some selected schools. In this experimental model, junior high school students did not have to take the entrance examination; instead their admissions to senior high schools were based upon their average academic scores in schools and their teachers' recommendations. Ironically, this new model did not reduce pressure on students as anticipated but, on the contrary, increased their burden. This is because, without taking the one-off entrance examination, students had to be aware of their academic performance and scores all the time to ensure that they could be admitted to their preferred schools in the future (Smith, 1997: 123-124). In other words, the pressure of entering a good school was still on students although it appeared otherwise. This model unfortunately proved to be unsuccessful and was eventually withdrawn in 1996. Despite this failure, the government still insisted on the policy of replacing the conventional Joint Entrance Examination for senior

high schools with a new scheme of Academic Proficiency Examination in 2001.²⁷

As in the UK, there are discordant voices and mixed attitudes towards this education reform. One of the most common comments about the reform is that its pace of change is too fast to meet the pace of society. This complaint may explain the failure of the experimental model just discussed. A recent national survey of teachers²⁸ also seems to reflect this problem. According to the survey, 52% of teachers feel that the pace of the education reform is too fast and 64% of them feel that the frequent changes in education are the biggest problem in their profession. This situation appeared worse when the survey found that 71% of teachers do not feel that they have enough support or resources to help them cope with the rapid changes. In addition, only 7% of teachers feel that their opinions on the reform process are respected (Zhuang, 1998: 84-92).

It is fair to suggest that teachers in Taiwan are facing a greater challenge than ever before. As role models endorsed by the high expectations of society, they are supposed to maintain or even to exceed an educational quality that will satisfy social demands, national policies and cultural norms. At the same time, they are also responsible for transforming the traditional practice of education into a new paradigm which can meet the demands of a shifting world. Given that teachers lack clear guidance over the transformation, as the above survey indicates, and live in a society which has always emphasised conformity rather than originality, it seems likely to be a long and uncertain journey before teachers can finally reach the end of the reform.

Conclusion

As comparison is the main theme of this thesis, this chapter uses a comparative perspective to examine teaching in primary schooling. Sections 2.1 and 2.2 compare various theories on schooling and pedagogical approaches. This theoretical review highlights the significance of the effects of a socio-cultural context on human educational activities. 2.3 identifies two of the essential components which make up schooling, namely educational ideologies and structures. These two components are formed from the beliefs and needs of a society and

²⁷ The main difference between the Joint Entrance Examination and the new scheme of Academic Proficiency Examination is that students' results of the later examination is no longer based on that of a one-off examination; students' performance in school is also taken into account.

²⁸ The samples used in the survey were primary and junior high school teachers. The total number of responses was 1010.

their interaction creates a distinctive schooling context in which teachers' practices are conditioned. 2.3 and 2.4 present the case studies of teaching in English and Taiwanese primary schools. They illustrate the fact that primary schooling in these two countries is influenced by two sets of educational ideas: in England by progressive education, and in Taiwan by Confucianism. Due to these two different belief systems, the outwards features of primary schooling, in terms of teaching approach, curriculum design, and educational system, are also different. These differences, both internally and externally, have prompted the hypothesis of this thesis, which assumes that English and Taiwanese schooling may have different impacts on teachers' opinions and experiences of using museums. In addition to the traditional features of English and Taiwanese schooling based on these long established beliefs and structures, this thesis adds another dimension to the discussion by introducing the current educational reforms which have been occurred in these two countries. Problems such as 'curriculum hybridisation' brought about by the reforms to education are assumed to have also had effects on teachers' practice, including their museum experiences. This aspect, therefore, is also taken into consideration in this thesis.

In sum, Chapter 1 examines teaching in formal education, and discusses how teaching is developed and conditioned in a school context. These ideas are further illustrated by comparing the two different teaching styles used in English and Taiwanese primary schools. The next chapter will shift the focus to the dimension of museum education, examining its development, rationale and its association with schools.

CHAPTER 3

SCHOOL VISITS TO MUSEUMS

Introduction

This chapter examines the relationship between museums and schools at three levels, namely globally, nationally and individually. At the global level, it provides an overview on how museum education has been associated with school education, how the evaluation of museum education has developed to date and how museum education can complement formal education. This part of the literature review is mainly based on studies from Britain and America because these two countries have been playing a leading role in developing the field of museum education, both theoretically and practically. At the national level, the second part of this chapter examines the relationships between museums and schools in England and Taiwan. It describes specific national contexts in these two countries for understanding the phenomenon of school visits to museums. At the individual level, the chapter finally reviews two museums' relationships with schools, namely the Natural History Museum, London, and the National Museum of Natural Science, Taichung. As these two museums were the field-sites for the case studies in this research, this chapter gives background information about each one.

3.1 The Relationship of Museum Education and School Education---Past and Present

Education is the inherent nature of museums. The word 'museum' explicitly indicates this potential: it originally comes from the Greek word for a seat of the goddesses of the Muses, a temple for worship, contemplation and inspiration; it later became a Latin word meaning a library, a study or a venue for scholars to express and discuss their opinions (Alexander, 1993/1979: 6). In reviewing the history of museums over the past six hundred years, Hooper-Greenhill (1992) also eloquently demonstrates that a museum is more than a static

storehouse of objects; it is an active force in shaping the knowledge through the use of objects to constitute meanings and represent the worldview of its time.

Although education is the intrinsic strength of museums, up until the last twenty years this strength was overlooked. Since the beginning of the twentieth century, museums had withdrawn from their full educational potential to merely concentrate on collections and conservation. Education became merely a “sub-specialisation” in many museums (Hooper-Greenhill, 1991b: 1). However, with the emerging trends of the information age and life-long learning, the educational function of museums has thrived again. It is now regarded as the key component of every museum by museum professionals around the world. For example, the American Association of Museums’ report *Museums for a New Century* claims: “If collections are the heart of museums, what we have come to call education...is the spirit.” (American Association of Museums, 1984: 55). A more recent report *A Common Wealth: Museums and Learning in the United Kingdom*, published by the Department of National Heritage in Britain, also asserts: “Education is intrinsic to the nature of museums... Unless museums make provision for education purposefully and with commitment, they are not truly museums.” (Anderson, 1999: 8).

Although the development of museum education has been on a kind of roller coaster, the sharing of educational responsibilities with schools is a commitment that has always been sustained by museums. Even during the period when the educational role of museums was diminished, ‘museum education’ was still understood as the provision of activities for schools (Hooper-Greenhill, 1991b: 1). In Britain, schools have always been regarded as the largest of the educational groups that use museums (Hooper-Greenhill, 1994a: 104). In America, *Museums for a New Century* refers to the relationship between museums and schools as, “...perhaps the most longstanding and successful example of the interest and ability of museums to join forces with other institutions in working towards common goals.” (American Association of Museums, 1984: 66). Such a close association cannot only be found in Western Europe or North America; it has been steadily developed by many museums around the world, as reported by the international organisation UNESCO.²⁹

²⁹ An early study *Museums and Children* (1979), published by the international organization UNESCO (United Nations Educational, Scientific and Cultural Organisation), clearly demonstrated that the phenomenon of school visits to museums existed around the world, including countries such as: Algeria, Belgium, Botswana, Canada, the German Democratic Republic, Iran, Mali, Mexico, Nigeria, Portugal, Thailand, the Union of Soviet Socialist Republics, the United Kingdom and the United States of America.

Over the long history of cooperation between museums and schools, the relationship has actually undergone various changes, subject to the shifting educational perspectives and goals of different historical contexts. To start with, the beginning of their relationship can be traced back to the appearance of many of the university museums in the late 17th century.³⁰ One famous example is the Ashmolean Museum which was attached to Oxford University and specially built for teaching purposes. Because of this function, the museum was unlike 'a cabinet of curiosities', a term commonly used to describe earlier museums. It was particularly designed to display its collection for reading and interpretation, in conjunction with a library, a lecture room and a chemical laboratory (Alexander, 1993/1979: 43; Hooper-Greenhill, 1991a:10; Hudson, 1987: 21). Following this example, it became a common feature for museums in the 18th century to be connected to universities for scholastic use, especially in the fields of botany and anatomy (Alexander, 1993: 47, 100).³¹ It was not until the birth of the first public museum--- the Louvre in Paris--- that museum education started to reach a public audience.

The opening of Louvre in 1793 was a celebration of the newly democratic state of France. It was an integral part of the government efforts to educate the most illiterate French people by allowing them to visit their national treasures for the first time. In addition to providing free access for the public, the museum actively carried out its educational mission in various innovative ways: through thematic displays, explanatory labels, cheap catalogues, and gallery teaching (Hooper-Greenhill, 1991a: 187; Hudson, 1987: 41-42).³² The museum also formed a close partnership with other educational institutions by welcoming students of all sorts. The success of the Louvre in demonstrating its educational potential encouraged a blossom of museums in the following years of the 19th century. At that time, while the idea of mass schooling was just emerging and the educational opportunities were still limited for most people, many museums were built on the premise that they would provide the public with the chance for self-education.

³⁰ In addition to Oxford University, Basel had the first University art collection during the 1670s. See Alexander (1993/1979: 23).

³¹ The museums referred to by Alexander here are botanical gardens, zoos and aquariums. The functions of these organisations fit into the definition of a museum adopted by the American Association of Museums. The only difference between the museums described above and an ordinary museum is that their objects are alive. See Alexander (1993: 99).

³² As Hudson notes (1987: 42), such approaches were revolutionary and had never been used in museums before because it was assumed that all museum visitors were well informed.

By the end of the 19th century, the educational role of museums had developed remarkably, particularly in combination with school education. British museums made greater efforts to further this progress. At the national level, the Victoria and Albert Museum is an excellent example illustrating the unity of museum and school roles. Like most museums of its time, the V&A Museum was deliberately built for educational purposes and was combined with an art school in its early days. To further reinforce its relationship with schools, the museum also offered loan services and cheap duplicate art works to local art schools (Hooper-Greenhill, 1991a: 19, 187).

At the local level, following the introduction of mass schooling in the 1870s, many British museums started to work closely with schools. The school day code was modified in 1894 so that children were allowed to visit museums during school time (Lewis, 1989: 24). A model of the school loan service had been gradually established since the 1880s. Liverpool Museum started its 'Circulating School Museum' in 1884, which was regarded as the first school loan service in Britain (Lewis, 1989: 5). The objective of this innovation was "not so much teaching as training; not so much the inculcation of facts as the illustration of the happiness that is to be obtained through habits of observation." (Chard, 1890)³³ This aim was well matched with object-teaching methods favoured in schools at this time, the purpose of which was to develop children's sensory faculties rather than imparting facts or information (Hooper-Greenhill, 1991a: 26). Many museums also embraced this educational aspiration to further develop novel teaching approaches to work with school children. Taking Halsemere Museum as an example, the museum can be imagined as an ample and vivid pictured book with clear illustrations, photographs and chronological explanations of the relationship between exhibits. The museum also offered free instruction by the curator to school children and built a specific classroom for teaching purposes. A special event 'objective examination' was held for children. In order to pass the exam, candidates had to observe and handle the objects, and study the related information (Hooper-Greenhill, 1991a: 21-23).

The object-teaching approach was well attuned to the core spirit of the progressive educational movement which advocated children's experience and self-directed learning at

³³ Quoted in Lewis (1992: 31) from Chard, J. (1890), 'On circulating museum cabinets for schools and other educational purposes', *Report of Proceedings... at the First General Meeting held at Liverpool*, London: Museums Association, p. 54-68; also in Hooper-Greenhill, (1991a: 29).

the turn of the twentieth century. The renowned progressive educator John Dewey endorsed the educational value of museums. Dewey proposed a model of an ideal school to which a museum was attached in order to augment learning (Dewey, 1990/1956: 87). Responding to the progressive trend, many British museum educators developed philosophical insights in museum education as well as exploring new methods of teaching children and working with teachers. One important initiator was Molly Harrison (1970), whose book *Learning out of School* was written to guide teachers in the use of museums. The book not only articulated the unique potential of museum education through suggesting various ways of utilising museum resources,³⁴ it also highlighted the groundwork essential to a successful school visit. Much practical advice was offered to teachers including the importance of the pre-visit and follow-up work, discussion with museum staff beforehand, preparation to ensure that children are clear about the aim of the visit, arrangements with parents and the assessment after the visit, etc.

While Harrison provides a comprehensive framework for conducting successful school visits to museums, Renee Marcou   (1961) gives specific advice to teachers about how to make use of objects in museums based on her experience at the Victoria and Albert Museum. In her book *The Listening Eye* (1961), Marcou   advocated visual education which she regarded as “a first step of all mental training.” (p. 1). She felt strongly that children’s visual experience in museums should not be replaced by teachers’ verbal instructions of information because “it is neither possible nor desirable in a short course of visits to the galleries, for us to attempt a course of art history; this would defeat our primary purpose---to encourage “immediate experience” of the objects.” (p. 12-13). To cultivate the skills of looking, Marcou   advised teachers to follow certain steps, including that of using sketching and drawing tasks to

³⁴ Five potential educational benefits of museums: using objects to give children evidence and a sense of reality; stimulating children’s aesthetic awareness and imagination by exposing them to collections; close contact and examination of beautiful objects helps children to develop a critical appreciation of things surrounding them; going to new places and seeing new people during the trip helps to broaden children’s horizons; enjoyable museum experiences can sow the seed of interest in children who will be able to use museums’ resources to enrich their adult life (Harrison, 1970: 11-15). Various approaches to using resources inside museums were given, such as handling objects, playing with hands-on exhibits, taking notes, participating in workshops, doing drama, combining music and reading and doing worksheets. The final aim of these activities was to encourage children to observe objects, to stimulate their interest and to raise questions and discussion among them. (Harrison, 1970: 32-40).

encourage children to look at objects carefully and sufficiently.³⁵

Despite the remarkable progress made by British museum educators during this time, it is worth noting that many museum curators did not recognise these efforts but only concerned themselves with collections and conservation. In these circumstances, education was no longer the primary task of museums as it used to be but became limited to those activities for school children. The chances for children to learn in museums were therefore mostly understood as attendance at educational programmes or use of loan services.

In comparison with the more passive attitude towards education found in British museums, progressive ideas had a more significant impact on the blossoming of hands-on museums and science centres in America in the twentieth century. The initiator of this type of museums was the Brooklyn Children's Museum which was founded as early as 1899. The museum was particularly aimed at young children between 6 to 12 years old and developed a holistic educational approach for its young audience, as its mission states:

"To bring together collections in every branch of local Natural History that is calculated to interest children and to stimulate their powers of observation and reflection, to illustrate by collections of pictures, cartoons, charts, models, maps and so on, each of the important branches of knowledge which is taught in the elementary schools. The Museum, through its collection, library, curators and assistants, will attempt to bring the child, whether attending school or not, into direct relation with the most important subjects that appeal to the interest of the children in their daily life, in their school work, in their reading, in their games, in their rambles in the fields, and in the industries that are being carried on about them or in which they themselves later may become engaged."(Hudson, 1987: 183-184).

From the above statement, there is a twofold meaning which can be drawn regarding the holistic educational approach of the museum. Firstly, education becomes an integrated part of every museum activity and the work of every member of museum staff, including the

³⁵ One piece of advice given to teachers was as follows: firstly, to choose one gallery which is related to the subject studied at school and give children a period of time to look at objects in this gallery. Next, to divide children into different groups to explore different themes covered in the subject of study. This act will direct the children's attention to certain objects and also enable the teacher to be free to give individual attention to children. Finally, to encourage children to look at one single object carefully at sufficient length of time so that they can form their own impressions. This task is the most important but also the most difficult to achieve, but according to Marcousé's experience, it can be done successfully through sketching or drawing. (Marcousé, 1961, p. 5)

curator, rather than a marginal section of the museum functions. Secondly, the purpose of learning is more than just the accumulation of past knowledge, but the cultivation of children's faculties and interests so that they may actively make use of knowledge for their own needs, whether at the present or in the future. As its mission statement demonstrated, education was learner-centred at the Brooklyn Children's Museum. To realise its educational objective, the museum created an informal learning environment full of different objects, representations, and activities for children to explore and to experience. Learning in the museum was no longer constrained to didactic educational programmes, but extended into the self-exploration of exhibitions and direct interaction with objects and displays. In order to promote this innovative concept to teachers, the museum staff organised special workshops and visited schools to give advice (Hudson, 1987: 186-187). The ideas of hands-on participation was soon adopted by museums around the world in the first half of the 20th century.

In the 1960s Piaget's developmental theory raised the 'Cognitive Revolution' (Hein 1998: 66), and its accompanying ideas concerning children's development and direct experience had a profound influence on both school and museum education. In America and Britain, the school curriculum started to shift from the linear approaches towards more integrated ones (Hein, 1998: 66). At the same time, a professional interest in informal learning of science in museums was also growing because the learning experience offered by museums was congruent with progressive education. Renowned scientists and professional organisations made efforts to study museum visitors' behaviour (Bitgood, Serrell and Thompson, 1994: 68-70) and to promote the association of informal learning in museums with school education (Ramey-Gassert, Walberg III and Walberg, 1994: 346). However, in spite of this enthusiasm, the ideas of museums as informal learning environments and learning through interacting with displays seemed to only be practiced in certain types of museums such as science centres, children's museums, or hands-on museums. Museums of other kinds were still unaware of the potential that the design of exhibits could play in facilitating visitors' learning and enhancing their experience.

During the 1980s, due to broad socio-cultural changes, museums around the world began to face the unprecedented pressure of having to justify their existence and their accountability for funding. They strove to develop a new relationship with visitors and to win public interest. In consequence, a new communicative function for museums has been developed,

under which all areas of practice are working towards a common goal, that is to use museum collections and resources to connect with people and cater for their needs. Education and entertainment are identified as the two most essential needs of today's audiences who expect easy access to information and have a greater choice of activities for their leisure time (Flak and Dierking, 1992; Hooper-Greenhill, 1994). The word 'edutainment' has become a widespread concept in the field of museums as well as other industries (Mintz, 1994: 32-35).³⁶

This trend is currently prompting museums to provide visitors with both intellectual and pleasant experience through the effective design of exhibitions, as well as a wide range of appropriate activities, programmes, events and publications. The educational potential of the museum is now broadly extended. As far as school visits are concerned, students can not only benefit from attending a greater range of educational programmes, but also learn from various informal activities such as exploring exhibitions, interacting with objects or people, and participating in events or activities. Their learning experience is deliberately provoked through active enjoyment and participation. As museum education now encompasses new meanings and develops innovative approaches, it broadens the learning opportunities for school parties as well as providing an alternative learning experience for children.

3.2 A Brief Review of Evaluation of Museum Education

Although there is a long history of museums serving their educational role as discussed in section 3.1, an evaluation of whether this role had been successfully achieved occurred much later. It was not until the 1960s that museum evaluations and visitor studies started to attract the interest of academics and museums. Hein (1998: 52) compared the data of four surveys on literature concerning museum evaluations (or visitor studies) during the twentieth century. Table 3-1 (p.58) shows the results of his comparison, and illustrates an evident dearth of studies in this area before 1960.

Among the few works on museum evaluation during the first half of the 20th century, Robinson's work between the 1920s and 1930s has attracted great attention. Robinson is regarded as the pioneer for extensively and systematically studying visitors' experience in museums (Hood, 1993: 17; Lawrence; 1993: 117). To study visitors' experiences, he mainly

³⁶ For example, Disney has made a strategy of increasing its emphasis on education and Sea World, a theme park in Florida, includes education as one of its essential missions. See Mintz, (1994:34)

Number of papers on visitor studies in the twentieth century, by decade				
	De Borhegyi ¹	Shettel ²	Screven ³	Hein ⁴
<1920	1	1	1	3
1920s	2	1	4	5
1930s	10	9	15	20
1940s	9	4	5	13
1950s	31	5	8	26
1960s	48	36	58	
1970s		99	143	
1980s		225	335	

Note:

1. Data from De Borhegyi and Hanson (1964) citing literature through 1965.
2. Data from Shettel (1989) citing literature through 1988.
3. Data from Screven and Shettel (1993). This bibliography includes some non-museum evaluation literature.
4. Hein (1996a). A listing of US and British papers published before 1960.

Table 3.1 Number of papers on visitor studies in the 20th century, by decade.
(sourced adapted from Hein, 1998: 53)

measured their observable behaviour inside museums. The visitors' behaviour was recorded and quantified, such as how long they spent in front of an exhibit, or which side they turned to when they entered a gallery. These findings became important indications for evaluating the success of museum exhibitions (Lawrence, 1993: 17). Using the same quantitative approaches, Melton (Robinson's student) examined children's learning as a result of school visits to museums. Children's learning was measured exclusively on the results of 'objective' tests which consisted mainly of multiple-choice and true or false questions regarding subject knowledge imparted by the museum lessons. In addition, Melton also conducted experiments to examine variables which may affect children's learning, such as the various forms of preparation before visits, and the different educational methods used in museums, e.g. discussions, lectures or guided tours (Hein, 1998: 48).

The rationale behind Robinson and Melton's work is primarily based on behaviourist psychology, which assumes that external features or stimuli in an individual's environment can lead to a change in the individual's response to that environment.³⁷ In the case of an exhibition, it is assumed that the exhibition can successfully achieve its objectives as long as it is carefully designed using essential criteria such as repeatedly impressing stimuli on the learners, and rewarding appropriate responses. Based on the behaviourist approach, an

³⁷ See also Hein's educational theories--- stimulus-response education, p. 15.

assessment of learning in museums depends heavily on the measurement of predetermined objectives, for example, how much information visitors gain, or how long they spend in front of an exhibit (Uzzel, 1993: 127).

The behaviourists' evaluation model of learning, which focuses on the measurement of predetermined objectives, is derived from formal education (Uzzel, 1993: 127; Kelman, 1995: 205). Eisner (1984: 32) has summed up the basis for this model as follows: "Educational objectives are typically derived from curriculum theory which assumes that it is possible to predict, with a fair degree of accuracy, what the outcome of instruction will be." During the 1940s and 1950s, this approach was applied extensively to curriculum design and learning assessment, particularly in America (Kelman, 1995: 205). Its influence soon extended to the field of museum studies where some researchers, although only a limited number at that time, used this objective model to evaluate museum education.

In 1960s, the interest in the evaluation of learning in museums started to grow as a direct result of a government programme on the assessment of the effectiveness of educational activities in America (Hein, 1998: 54). Both formal and informal education, including museum education, were the targets of this innovation. The concept of 'accountability' was introduced and evaluation of educational activities was established nationwide. Professional associations for evaluating museum programmes were developed in the following decade (Hein, 1998: 55). The American experience was soon followed by the Natural History Museum in London in the 1970s. The museum became the first one in Britain to study its visitors, and based on the results of the studies to further develop its educational policies and exhibitions (this will be discussed in section 3.4.3.1). Since then, studies on museum evaluation have expanded dramatically as shown in the Table 3.1 where it can be seen that most of the work has been carried out in North America and Britain: very few studies have been conducted in the rest of Europe (Economou, 1999: 45).

During this blooming period of museum evaluation, the behaviourist model of evaluation continued to be prevalent. In addition, the use of large-scale of surveys to study visitors started to emerge in the 1960s and soon became popular: this type of survey accounted for two-thirds of evaluation research in museums by the mid 1970s (Lawrence, 1993: 188). Early visitor surveys merely focused on visitors' demographic details such as age, sex, and geographical locations. In the 1980s, they started to collect more detailed profiles of

museum visitors such as what proportion of adults visited museums, who they were and why they visited (Hooper-Greenhill, 1995: 3). Behaviourist and survey approaches are regarded as 'quantitative' or 'scientific' research as both of them involve empirical methods, provide statistical data, and seek to make generalisations. This kind of quantitative research made up the main stream of the approach towards museum evaluation through the 1960s to the 1980s as shown by several bibliographies (e.g. Larrabee, 1968; Elliot and Loomis, 1975; Screven, 1984).

Despite its popularity in the research of both formal and informal education, quantitative research has been attacked for its limitations. Critics of this approach point out the danger of the objective behavioural model, warning that not all learning outcomes can be predicted or measured, nor can its methods of rigidly controlling environmental variables be applied to the human world. In the 1960s, an alternative model for studying education was proposed by Philip Jackson who used ethnographic methods to study life in the classroom. Jackson's approach was regarded as 'qualitative' or 'naturalistic' research in contrast to the quantitative approach. In his work, his concerns lay not so much with 'what was taught and intended', but with 'what was learned and unintended', or in Jackson's words "the hidden curriculum" (Lawrence: 1993: 118). In other words, the focus of this new approach shifted from the measurement of objectives set up to discovering what the learners understand and how they interpret their experience. A learner's beliefs, values, and prior experience, in other words, the socio- cultural context (s)he has brought into learning, is emphasised in this approach. These research concerns led to new methods of collecting and analysing data, which are in total contrast to the quantitative ones: field-based work in contrast to experimental-design environments, open-ended questions in contrast to structured questionnaires, the collection of narrative or descriptive data rather than numerical data, and seeking to understand individual cases instead of making generalisations.

In the field of museum studies, the qualitative approach first appeared in the 1940s when Wittlin used this approach to study visitors' thoughts and reactions to exhibits through asking them open-ended questions, and documenting their actual words (Hein, 1998: 45). Such methods did not appear to attract much attention from researchers until Jackson's work caused a stir in formal education. In the 1970s, Robert Wolf started to champion the qualitative approach in museums (Bitgood, Serrell and Thompson, 1994: 79; Hein, 1998: 67). However, compared to the dominant presence of quantitative research, the qualitative approach was

much less popular in museum evaluation.

In the 1980s, due to broad socio-cultural changes, museums started to develop their relationship with visitors and began to rethink their visitors' needs and expectations. As far as learning is concerned, it has been gradually recognised that the museum is an informal, free-choice learning environment and visitors' prior experience, motivation, and companions with whom they visit together, all play an important role in their learning. The rationale of museum education has shifted from 'what exhibits do to visitors to what visitors make out of exhibits' (Miles, 1993: 28). This important shift in rationale has led to a re-examination of the approach to museum evaluation. The behaviourist objective model is criticised for being incomplete in studying museum visitors. Consequently, new approaches from various disciplines such as anthropology, sociology, psychology and education, have been utilised in order to broaden the field of approaches used in museum evaluation over the last twenty years (Bicknell and Farnelo, 1993: 7). The qualitative approaches which are commonly applied to these disciplines are currently encouraged and practised by museum researchers (e.g. Lawrence, 1993; Macdonald, 1993; Zavala, 1993).

Most scholars and practitioners in museums now recognise a need for both quantitative and qualitative research in museum evaluation (Bitgood, Serrell, Thompson, 1994: 90-92; Hein, 1998: 77). The former is particularly good at measuring the characteristics of a successful exhibit, while the latter can more accurately understand visitors' personal experiences. Having said that, it is generally agreed that very little qualitative work has been conducted so far (Hooper-Greenhill, 1995: 6). In particular, the use of the field-based, qualitative approach to studying the impact of the socio-cultural context on learning, especially children' learning during school visits to museums, is still rare (Falk and Dierking, 2000: 102).

The lack of in-depth, qualitative study is clearly shown in the literature review on school visits to museums in Britain and Taiwan, which will be discussed in more detail in section 3.4 and 3.5. In general, many studies in this area in Britain have used survey methods to present statistical data regarding the frequency of museum visits, the choice of museums and museum services, etc. Many studies conducted by official organisations such as the Department of Education and Science, and the School Curriculum and Assessment Authority, did use interviews and observations to report on the impact of school visits, e.g. how the visits are linked to the teaching in the classroom. These reports, however, did not provide an in-depth

analysis of the process of museum visits, showing how teachers' or students' museum experiences are affected by their schooling contexts. In other words, the impact of the socio-cultural context on a visitor's museum experience is notably absent from most studies on school visits in Britain. In comparison, much fewer studies on school visits are available in Taiwan as this field has only developed in recent decades. The limited number of studies found in this thesis have also shown an apparent tendency to use quantitative rather than qualitative methods.³⁸

In this section, the development of museum evaluation has been briefly reviewed. Due to the prevalent use of quantitative methods in such evaluations, this section shows a need to include qualitative research, stressing the socio-cultural context of the museum visits, to study visitors. This thesis has attempted to apply such an approach to address the impact of schooling contexts on teachers' museum experiences. So far, this chapter (section 3.1 and 3.2) has outlined the historical development of museum education, in terms of the development of its relationship with schools and the approaches used to evaluate its educational role. Throughout its development, museum education has been closely associated with school education. Having said that, museums are now becoming aware of their distinctive educational features, and based on these, to develop a new relationship with their visitors, create new learning experiences, and look for new approaches to evaluating their visitors' experience. The next section will examine the unique features of museum education, and discuss how different they are from those of school education.

3.3 Museum Education vs. School Education

What are the unique learning opportunities museums can offer which are hard to find in schools today? In the book *Unschooling Mind*, Howard Gardner (1993) suggests that museums, especially children's museums, are more ideal than schools as learning venues for children. According to him (1993: 201), 'school' is often connoted as a "serious, regular, formal, deliberate decontextualised institution" and seems merely to train certain modes of learning and to pursue standard performance. On the other hand, 'museum' means "an occasional, casual, entertaining, enjoyable outing". In his view, children can gain more refreshing and stimulating experiences through learning from exhibitions, activities and role models in museums. Those experiences, including first-hand experience, self-motivation,

³⁸Only Liou's study (1997) found in this thesis provides qualitative data.

the practice of multiple intelligences, and learning from others, correspond more to the natural learning processes of human beings, who primarily rely on their intuitive and sensory capacities for learning. Not every museum can meet Gardner's expectations; nor can every school be a scapegoat for bad practice. However, Gardner highlights the unique learning possibilities that museums can offer as a complement to school education today.

Above all, learning from objects may be counted as the most significant feature which differentiates museums from schools, and most other educational institutions or media. As Hooper-Greenhill (1994a: 105) claims: "If the potential for learning from objects is not perceived, museums will not be used." Learning from objects is assumed to be the most primary behaviour of human beings, who learn from their surroundings by observing, handling, smelling and listening before any other modes of learning, such as learning through language, come into use. Through the centuries, similar opinions about learning from objects have constantly been stressed by the philosophers and educators: from Bacon and Comenius, to Rousseau, Pestalozzi and Froebel, to more recently Dewey and Piaget (Hooper-Greenhill, 1991a: 26; 1994b: 231-232).

However, with the introduction of mass schooling, learning from objects was gradually replaced by symbolic learning. The mode of symbolic learning mainly involves the use of language through reading or instructing, as mostly occurs in school education. Although symbolic learning is good at cultivating 'pure thought' skills such as abstract thinking and reasoning, it is not the only way in which children can learn. According to Burner (1966), children's cognitive development goes through three stages: namely enactive, iconic and symbolic learning. The enactive mode means learning through enacting with objects, people or through activity. The iconic mode consists of learning from two-and three-dimensional visual images such as pictures and objects. The symbolic mode mainly involves learning through languages which refer, categorise, and generalise the world we experience. In brief, children learn firstly through action, then imagery, and finally language. The sound development of symbolic thinking actually rests on correspondence with the prior experience brought by enactive and iconic learning. As Burner explains: "if one is using symbolic representation to guide looking or to guide action, the success of the effort will depend upon the extent to which the sphere of experience or action has been prepared to bring it into some conformation with the requirements of language." (p. 55)

According to Burner's theory, it can be inferred that the direct experience with objects on which enactive and iconic learning are primarily based, is the key element contributing to children's cognitive development. However, such experience, compared to that of symbolic learning, is less emphasised in schools. Resnich (1987) also criticizes school learning for being too symbol-based to connect to the real life context in which people often use objects, tools and events in their reasoning, without necessarily using symbols to represent them. Because of this disconnection, she further points out that "there is not supposed to be much continuity between what one knows outside school and what one learns in school... Schooling is coming to look increasing isolated from the rest of what we can do." (p. 15)

Apart from providing concrete experience, objects have the potential of expanding a single, fixed interpretation of information. Hooper-Greenhill (1991a: 109) points out that any object has the possibility of multiple meanings which are "individual, fluid, unstable and precarious and exist within social, personal, political and economic contexts". For example, in the case of viewing a historical costume, the feeling and perception of it may be closely associated with an individual's taste of clothing, the experience of seeing or wearing it before, and a personal understanding of its historical context, etc. In addition to the subjective perception, the costume can also be analysed in great depth in a more objective manner by examining it from various perspectives and linking it to different subject areas, as shown by the example (see Figure 3-1, p.65) presented by Birmingham Museum and Art Gallery (Hooper-Greenhill, 1991a: 72). In other words, the study of an object can start with the arousal of personal meaning, and from this standpoint, gradually build pieces of information which are coherently associated with this object.

Such a learning process is congruent with Piaget's theory. Piaget argued that the individuals' prior perceptions actually determine how people perceive what is presented to them and what they will learn from it. Learning is a process of either integrating new ideas into what is already known (assimilation) or adapting the existing cognitive framework to accommodate new ideas (accommodation) (Boden, 1979). Inferred by this theory, if the new information corresponds with the cognitive structure of a viewer, then it will be easily assimilated; on the contrary, if the information does not fit into the viewer's cognitive structure, it will be ignored or neglected. From this viewpoint, personal engagement with new information is a vital element in the process of learning (Schouten, 1987; Falk and Dierking, 1992; Roschell, 1995).

The potential an object has for containing multiple meanings for viewers effectively provides the opportunity of connecting personal existing cognition with new messages. In addition, objects can be related to different subjects in the curriculum, pieces of information associated with one object, though from different areas, are easier to be knitted together, and therefore, easier to be assimilated or accommodated into the existing knowledge. In this sense, it is suggested that well associated information, in comparison to fragmented knowledge divided by irrelevant subject boundaries, is easier for children to learn and understand.

Apart from fostering cognitive development, learning from real objects is the 'magic' ingredient of museum education which immediately ignites children's interest in subjects studied. The thrill of seeing real things will hardly ever be replaced by visual representations appearing in other media such as television, books or computers (Sheppard, 1993: 2). In the book *Education in Five Dimensions*, Beaumont (1960) points out that objects in museums can not only give children a sense of length, breadth and depth, but can also bridge time and space, and moreover, create a spiritual experience. Beaumont's statement can be illustrated by viewing a Chinese ceramic vase made one thousand years ago. Children can observe the vase from different angles to gain a three dimensional senses; they may also feel overwhelmed by its historical value, amazed by its artistic achievement, or have their curiosity raised about its social cultural context. Such a 'Wow!' experience is not limited to historical or art museums, but exists in any museum where the collection is based on authentic objects. For example, seeing a dinosaur fossil in a natural history museum also has a strong emotional impact on children. The affective experience not only stimulates children's interest in the subject studied, but also has a lasting effect. However, this emotional feeling is often ignored in schools.

The second educational potential museums offer is the opportunity for self-directed learning. Gardner (1983) has proposed the theory of multiple intelligences, suggesting that there is a broad spectrum of learning styles and abilities among people. According to him, there are seven types of intelligences, namely, linguistic, logic-mathematical, spatial, musical, bodily kinaesthetic, interpersonal and intra-personal intelligence. Individuals differ in the strength of these intelligences, with one or two areas dominating. This means that people tend to apply their most favourable ways to learning or to solving problems. In real life situations, some tasks or problems may need more than one approach to tackle them. Therefore, the development of various learning styles and skills seems necessary.

Gardner's theory clearly explains why people learn, remember, and perform in different ways. Instead of encouraging diverse learning styles, however, school education tends to be teacher-led and to foster similar learning styles in divergent learners by using the same materials and same teaching methods. Furthermore, school education often over-emphasises the subjects of language and mathematics at the expense of other intelligences. In contrast, as the result of the new communicative policies, many museums are today becoming open learning spaces, providing abundant materials and opportunities for exercising different learning styles. Apart from joining formal educational programmes, children are also encouraged to explore these spaces through their own preferred ways. In this environment, learning is active and self-directed, meaning that children can choose what interests them most and find out the information according to their own style and pace.

The chance children have to choose their preferred learning styles actually increases their interest and confidence in learning. Research shows that many poorly motivated or academically under-achieving children in schools often display unexpected strengths and produce surprisingly good performances in museums (Gardner, 1993; Price and Hein, 1991, Gottfried, 1981). The confidence brought by the success of self-directed learning is particularly important in this age of information technology and lifelong learning. Hudson (1987: 173-174) argues that one of the main problems in our modern society is that ordinary people feel insecure and lack confidence when they face the rapidly accumulated and increasingly specialized knowledge. "An intellectual proletariat" has now replaced the traditional type of proletariat (p. 174). Learning becomes a lifelong pursuit to escape intellectual poverty and mental insecurity. In facing this situation, museums have made full provision for lifelong learning: they not only provide the profound knowledge which is accessible to anyone at any time, they also empower visitors to control their learning by providing a free-choice and self-exploratory environment.

In addition to object learning and self-directed learning, the third educational potential museums provide is to facilitate social mediation in the learning process. The idea of socially mediated learning is developed from Vygotsky's theory which claims that learning is more than individual endeavour but involves collaborative efforts between people. Vygotsky's experiment showed that two children who had very similar outcomes of psychological tests might behave differently in the situations in which only one of them received help from a more capable partner. The child who received assistance could easily

solve the problem she could not solve before. On the other hand, the child without any help still has difficulties in solving the problem. Accordingly, Vygotsky defined a child's 'zone of proximal development' as being based not on his/her individual performances but on how much (s)he can accomplish with the help of more capable partners (Matusov and Rogoff, 1995: 100).

This theory highlights the importance of social interaction during the learning process. In reality, it is common for people to learn through talking, listening and observing others. Learning hardly occurs in a social vacuum. However, school education places much more stress on the independent learning process than on the social aspect of learning (Resnick: 1987). Even in schools that encourage cooperative learning, children can only interact with their classmates who usually have similar backgrounds. On the other hand, in the museum where visitors are of all ages and from diverse socio-cultural backgrounds, a wide range of learning behaviour naturally occurs, along with the forming of different experiences and opinions. Because of this, the museum is ideally regarded as "a community of learners" where people can learn by observing, listening to and even talking with other people (Matusov and Rogoff, 1995: 101; Falk and Dierking, 2000: 91-112)³⁹. The rich social interaction generated in museums, according to Vygotsky, may significantly contribute to the "zone of proximal development" in children.

From a broader educational perspective, the experience of going on a museum trip, meeting different people, and learning how to behave in a public place is a great opportunity for children to become socialised and prepared for the outside world. This social benefit successfully fulfils one of John Dewey's ([1916] 1944: 20)⁴⁰ educational aspirations, that is to give a child "an opportunity to escape from the limitations of the social group in which he was born, and come into living contact with a broader environment." Furthermore, as a museum is often regarded as a cultural institution which presents ideas and values as well as welcomes people of different backgrounds, it is important for children to be conversant with this communicative venue at an early age. This will help them to understand, respect and interact with varied cultural groups or opinions presented in museums, and also to develop

³⁹ The type of social mediated learning can happen within or between groups. Studies of social interaction within groups, such as families or school groups, can be found in McManus (1988), Tuceky (1992), Moussouri (1997); research on social mediated learning between groups can be found in Koran et al. (1988).

⁴⁰ Quoted in Matusov and Rogoff (1995: 100). It was originally quoted in Dewey, J. ([1916] 1944), *Democracy and Education*, New York, Macmillan.

their own identify in this public space. The lesson of “cultural literacy”, as termed by Anderson’s words (1999: 32), is an imperative for children who live in an increasingly pluralistic and democratic society.⁴¹

Because museums have unique strengths in education, it is argued that learning in museums should not be assessed according to the same criteria as those used in school education (Price and Hein, 1991: 510). In comparison to successful learning in school, which is often judged by verbal and written tests and short-term learning outcomes, Falk and Dierking (1995: 12) propose a definition of meaningful learning in museums as “new ideas, attitudes, information or skills acquired which become part of the visitor’s permanent store of knowledge, available for his or her use long after the museum visit has ended.” From this definition, two essential points can be drawn. Firstly, learning in museums has multiple layers of indicators, which include cognitive development as well as affective learning (such as attitude, feeling, belief) and psychomotor learning (how to play a instrument or to focus a microscope) (Falk and Dierking, 1992: 99). Secondly, rather than short-term gains, learning in museums should emphasise long-term memories which visitors will be able to recall after a long period of time and apply to the new situations and problems. By this definition, meaningful learning in a museum context, which encompasses multiple dimensions of development and stresses the long-term impact, is indeed difficult to assess. Yet, Falk and Dierking suggest that the rich experience generated in museums through observing objects, reading labels, operating devices and talking to other people, is more likely to be remembered longer and correlates well with the natural learning process. A rich experience, therefore, can be counted as a useful indication of meaningful learning in museums.

Museums are a compelling educational resource offering meaningful yet different learning experiences from those available in schools. Although museums and schools have different ways of accomplishing their educational missions, their relationship should be based on cooperation, rather than competition, which in theory can optimise the children’s learning experience. As a successful relationship always starts with mutual understanding, this section has tried to delineate the differences between museums and schools by demonstrating

⁴¹ In Golding’s study *New voices and visibilities at the museum Frontiers* (2000), it is clearly demonstrated that museums can enable visitors to challenge the one-faceted knowledge about other groups or cultures, as well as to voice their own opinions. However, Ohta’s study (1998) presents an interesting but contrary phenomenon; it indicates that visitors’ experience of the exhibition was merely a confirmation of their own beliefs or values rather than the reception of messages intended by the museum.

the unique educational potential of museums, and how this can complement school education from a theoretical perspective. The next section will take a different stand, examining the relationship between museums and schools in the real-life contexts of England and Taiwan.

3.4 Museums and Schools—A Case Study of England (Britain)

3.4.1 Historical Review

In England, museums have long been accepted as educational institutions and, since their first appearance, they have established a close relationship with schools. For example, the world's first public natural history museum, the Ashmolean Museum, which opened in 1683, was part of Oxford University, and the first public gallery in Britain, Dulwich Picture Gallery, was also attached to Dulwich College from 1814 (Lewis, 1992: 25-26; Hooper-Greenhill, 1991a: 10). During the 19th century, due to extremely limited educational opportunities for the general public, many museums in England were established to function as "the advanced school for self-instruction" (Hooper-Greenhill, 1991a: 25).

After the introduction of mass schooling in the 1870s, the method of object-teaching became one major approach used in schools. This enabled teachers to look to museums for material resources. Responding to the growing demands of teachers, museums started to develop a scheme of loan services to schools. Furthermore, the introduction of the Day School Code of 1894 brought an increasing number of school visits to museums. From these visits there gradually emerged a question over who should be responsible for teaching in museums. A considerable debate followed. On the one hand, school teachers felt that curators who had subject knowledge about collections should teach, whilst on the other hand, curators who felt they had little time and insufficient teaching training were reluctant to take on this task (Hooper-Greenhill, 1991a: 27-28). Although no general agreement on this debate was reached, various solutions had eventually been formed by the 1930s: there were at least three types of staff working with schools in museums by then: curators, tour guides and teachers seconded from LEAs (Hooper-Greenhill, 1991a: 43).

During the First World War, museums successfully fulfilled their educational function by effectively responding to the social needs of the time. Apart from mounting exhibitions to convey important information to the public, many museums even replaced the role of those

schools which had difficulty operating, due to various reasons such as school buildings being used for military purposes, teachers being called up for military service or a lack of teaching resources. In some cities, Manchester and Liverpool for example, several museums worked closely with their local schools: children were taught lessons in museums and special schemes working with teachers and linking museum visits to schoolwork were also developed (Kavanagh, 1994: 82-86)

Because of the great contribution made by museums during wartime, after the war, the government eagerly tried to maximise museums' educational potential by linking them to local educational authorities. The first attempt was the passing of a new Education Act in 1918, which allowed local educational authorities to provide financial aid to museums for improving school services. Having done that, the government proposed that museums should be transferred to the Board of Education and administrated by local governments. However, this proposal was strongly opposed by many curators, who argued that the function of museums should be distinct from that of schools, focusing primarily on collecting, conservation and research (Kavanagh, 1994: 86-88). The attitudes of these curators inevitably led to a division within museums between the education function and their other activities. From then on, museum education became a marginalized activity, separated from other curatorial work, and was mainly understood to be a provision just for schools.

In contrast to the curators' indifferent attitude to museum education, there was a group of specialist education staff, appointed by either LEAs or museums, who were enthusiastically working with schools and were pioneers in developing appropriate methods for teaching children in museums. Many fundamental philosophies and teaching methods in museum education for children were created by these specialists. Children's direct experience with objects was identified as the key objective of school educational programmes. The traditional guided tours which were once used prevalingly by museums were no longer regarded as an appropriate method for children (Hooper-Greenhill, 1991a, 51-53).

During the 1960s, numbers of school visits increased remarkably. More educational officers were appointed by local educational authorities to accommodate the rising numbers. These educational officers were actively engaged in working with schools and soon became the first group of education professionals among museum staff. Their clear identification with and devotion to school work gave many curators the excuse to withdraw from their previous

educational duties to concentrate on curatorial work only. Museum education gradually became the responsibility of these appointed educational officers (Hooper-Greenhill, 1991a: 55-56). As a result, museum education became formally recognised as an essential provision for schools, distinguished sharply from other functions of museums. This perception was clearly reflected in many publications of this time. For example, an official report, the Rosse Report (1963: 31-34), devoted a separate chapter to museum education which discussed only two areas, namely 'school museum services' and 'museum training for schoolteachers'. Another example is the first manual book for museum educational officers produced by the Museums Association in 1967, *Museum School Services*, the title of which also clearly indicated the primary job content for museum educators at this time.

Despite the rising number of appointed educational officers in museums, there were still not enough of these officers to serve the rapidly increasing numbers of school parties in person. This prompted the emergence of an important new scheme which aimed to enable teachers to use museums under self-direction, through the provision of teachers' centres, resource packs, training courses, etc. (Hooper-Greenhill, 1991a: 55-58). With regard to teacher-training courses, some museums had for some time already been carrying out work similar to in-service training for teachers.⁴² To reinforce the liaison between museums and schools, both the Rosse report (1963: 33) and the Wright report (1973: 41) further suggested that, in addition to attending a course of in-service training, teachers should be taught to use museums as part of their initial teacher training. Although this suggestion did not become a requirement, many institutions do still provide sessions for student teachers on how to use museums (Department of Education and Science, 1990c; Department for Education, 1993c).

In the 1980s, reduced government funding forced many curators to leave their ivory towers and cater for the needs of museum visitors in order to gain public support and funding. The previous priorities of curators were replaced by new communication policies, which actively aimed at making museum collections more accessible and enjoyable for the public. Under these policies, museums' educational roles were reviewed and substantially extended. From that point onwards, museum education was no longer limited to working alongside schools but became an integral and vital function of museums, actively involving every aspect of

⁴² For example, an early report of the British Museums Association in 1920 pointed out that some museums had already worked in liaison with LEAs and curatorial staff had given instruction to teachers. See Hooper Greenhill (1991a: 33).

museum work through collections, marketing, design of exhibitions, publicity, publications and so on.

As for the relationship with schools, the Educational Reform Act in 1988 had remarkable impacts on museum provision for schools in both positive and negative ways. The most significant effect has been the introduction of the National Curriculum, which gives museums clear guidelines in presenting their collections to schools. Furthermore, although there is no statutory requirement on schools to conduct educational visits, the National Curriculum does encourage teachers to use museums to facilitate children's learning. For example, the programme of study for History Key Stage 2 prescribes that: "Pupils should be taught, a: how to find out about the past from a wide range of sources of information... for example documents, printed sources, CD-ROMS, databases, pictures and photographs, music, artefacts, historical buildings and visits to museums, galleries and sites." (National Curriculum: 2000) Despite all the positive effects of the curriculum, there is a worry that museums and schools may interpret the curriculum too strictly to actively make use of learning opportunities which may not easily fit the statutory descriptions (Reeve, 1996: 237; School Curriculum Assessment Authority, 1996: 7, Baxter, 1997; Woff, 1998: 11).

The second impact of the ERA 1988 on museums was the introduction of Local Management of Schools, under which most school funding was devolved from the LEAs to individual schools and mainly depended on the number of pupils. The result of this act was that many LEAs started to encounter difficulties in continuing their financial support of school services in museums, including the employment of educational officers, funding for school loan services and payments for school visits. The recent government policy Fair Funding further indicates that on average a 90% delegation of LEAs' funding to schools will be achieved by 2003/2004. This policy places museum educational services for schools in a more vulnerable position (Lampard, 2001: 5- 6). Because of these new funding regulations, many museums are no longer able to rely on financial support from their LEA, but have to charge schools for their visits and use of educational services. On the one hand, with the uncertainty over the funding for museum education, it becomes more difficult for museums to have long term plans for, as well as long term relationships with, individual schools. On the other hand, museums have had to improve their educational services in order to attract school customers. For this purpose, several government schemes have started to support educational work in museums financially and technologically, helping them to provide

schools with better services.⁴³

3.4.2 The Current Patterns of School Visits to Museums

Although the practice of school visits to museums in Britain has had a long history, it is claimed that there has been little substantial research or large-scale study in this area (Cooper and Latham, 1988: 256; Baxter, 1997: 50). National Heritage (1993) has also confirmed there is a lack of sufficient information about the educational use of heritage attractions. Having said that, there are still numerous studies, which have provided findings useful to understanding the general patterns of school visits in Britain, as discussed next.⁴⁴

The most overwhelming finding that emerges from the studies is that educational visits, including visits to museums, are regarded by teachers to be favourable and worthwhile school activities (Adams, 1990; Gardner Smith Associates, 1990; Keeley, 1993b; Baxter, 1997). According to two ILEA⁴⁵ surveys of schools in inner London, the average number of museum visits in 1975/76 was 12.1 visits per school per year and in 1988/89, 12.6 visits (Adams, 1990). This result indicates a steady pattern in the use of museums and galleries by schools over 10 years. The latest survey by Baxter (1997) provides further significant statistical data to illustrate teachers' attitudes towards educational visits. According to his survey of East Midlands schools in 1992, 95% of 1284 schools that responded agreed with the statement, 'Day visits are an important part of school life', while 50% strongly agreed. The above tendency explicitly correlates to the great value museums place on their school audience. For example, the result of Anderson's national survey (1999)⁴⁶ showed that schools were clearly identified as the highest priority audience by all types of British museums. Among all levels of the school audience, primary schools have always been regarded as the largest group to visit museums (Cooper and Latham, 1988; Keeley, 1993a).

⁴³ For example, the DfEE Museum & Gallery Education Programme has given £3 millions to support museums projects for schools; and the DCMS/Resource Museum Education Challenge Fund offers educational advice and training to museums. See Lampard (2001: 8).

⁴⁴ It should be noted that some studies referred to here have looked at the broad term of heritage attractions, which includes museums, galleries, historic houses and sites.

⁴⁵ ILEA stands for Inner London Educational Authority, which was abolished in 1990 and replaced by Local Education Authorities for the Inner London Boroughs and the City.

⁴⁶ The survey conducted in 1996; with a total of 566 valid responses from museums, the survey is claimed to be the largest survey of museum education undertaken in the UK.

The unprecedented changes brought by the ERA in the late 1980s attracted a great interest in research on school visits. Many studies were conducted during this period of time, either predicting or evaluating the influence of the impacts the ERA had on educational visits. The most highlighted issue is whether the ERA has affected the number of school visits. Regarding this, it may be hard to build a national picture as schools in different local areas may have different financial issues which may directly influence their visits. Having said that, several studies display a consistent result suggesting that the majority of teachers could have as many school visits as they wished or at least could maintain the number of school visits after the implementation of the ERA (Gardner Smith Associates, 1990; Maychell, Keys and Steeples, 1991, Baxter, 1997).

The current prosperity of the school visit market does not mean that the ERA has had no impact on schools at all. On the contrary, apart from common considerations such as children's safety, factors such as the shortage of funds and the pressures of implementing the National Curriculum have inevitably been putting more constraints on teachers undertaking educational visits (Adams, 1990; Gardner Smith Associates, 1990; Maychell, Keys and Steeples, 1991; Department for Education, 1993a, Baxter, 1997). Why is the school-visit market still maintained in a stable condition and even showing a sign of growth when teachers are encountering increasing deterrents to visiting museums? With regard to this question, one possible explanation is that, despite the pressure it has brought on teachers, the National Curriculum, as discussed earlier, does encourage the use of museums in facilitating children's learning. Another plausible explanation is given by Baxter who, based on the data from his further interviews with teachers, claims that despite the increasing difficulties most teachers are facing when organising museum visits, there remains a significant level of commitment to overcoming these obstacles whenever possible in order to maintain the number of visits. This attitude is clearly illustrated by the comment of one teacher he interviewed:

"... more and more teachers are aware of the difficult, potentially dangerous position they put themselves in when they organise any school visit.... But I would like to believe that the educational value of a trip and the arguments in favour of organising trips will always outweigh the constraints put on by government, put on by the economy or put on by the lawyers, because their value to me is absolutely clear and obvious and although things are getting more difficult I would say that the educational value of them is there for all to

*see.*⁴⁷

The traditional value placed on educational visits and the current influence of the National Curriculum have a clear effect on teachers' choices of destinations and objectives for school visits. A belief in first-hand experience is the most significant reason given by teachers in explaining why they place so great a value on school visits or museum services. Furthermore, the stimulation of interest in subjects, the opportunity for hands-on experience, the development of study skills, and the fostering of social skills are common expectations of teachers undertaking school visits (Department of Education and Science, 1990a: 4, 1992: 3; Gardner Smith Associates, 1990: 16, 25; Department for Education, 1993b: 1-2; Baxter, 1997: 186-199; Harrison and Barnes, 2001: 13). In addition to the educational value in general terms, a specific focus on the criteria of the National Curriculum and the need to increase subject knowledge have become crucial concerns of teachers in identifying where to visit and what the purpose of each visit is. This pattern was recognised in the subsequent studies as a national trend immediately after the ERA (Gardner Smith Associates, 1990; Maychell, Keys and Steeples, 1991; Bridges and McBride, 1993; Keeley, 1993a; Baxter, 1997). This clearly indicates that, while teachers are upholding general educational values, they are now beginning to form more specific aims and adopt more focused approaches to using museum resources in relation to the National Curriculum.

As visits are now rarely regarded as a fun day out but have a strong educational orientation, this has also affected the way teachers prepare. Several studies report that the majority of teachers have done preparatory work before the visit, either by making a preliminary visit to the chosen museum, contacting museum staff or through acquiring new knowledge of the museum (Department of Education and Science, 1989b: 2, 1990a: 5; School Curriculum and Assessment Authority, 1996: 4). Furthermore, materials which can help teachers plan the visits in advance, such as teachers' educational packs or guide books, appear to be the most popular facility required by teachers from museums (Cooper and Latham, 1988: 261; Gardner Smith Associates, 1990: 18; Keeley, 1993b: 66; Baxter, 1997: 229). In comparison to the requirement of museum information beforehand, it seems that fewer teachers have attended the in-service training offered by museums, although examples of courses giving instruction in how to use museums can be found in some teacher training colleges and universities (Department of Education and Science; 1990c). Cases of good preparation and follow-up

⁴⁷ Interview data of one secondary teacher. Quoted in Baxter (1997: 212).

work done by students are also documented in many reports (Department of Education and Science, 1989b: 2-3, 1992: 5, 1993b: 6; School Curriculum and Assessment Authority, 1996; Clarke et al.,2002), yet the quality of this part of the work varies from school to school.

While it is evident that school visits are becoming more related to class work and to the criteria of the National Curriculum, it is also interesting to note that, compared to secondary school teachers, many primary school teachers still prefer to link museum visits or collections to several curriculum areas (Department for Education, 1993b: 5-7; Department of Education and Science, 1989b: 4-7, 1990a: 4-5, 1992: 1-4; School Curriculum and Assessment Authority, 1996: 4-5). Stimulation of interest and encouragement of active participation are often the reasons behind teachers' integrated approaches to using museum resources. Among these approaches, making art and developing language skills seem to be the most frequently used vehicles to link cross-curriculum subjects.⁴⁸ This finding may suggest that while fulfilling the specific criteria of National Curriculum, many primary school teachers also try to make their visits more stimulating and enjoyable in order to enrich children's learning experiences.

3.4.3 The Case Study of the Natural History Museum, London

3.4.3.1 Historical Review of the Museum's Educational Function

The Natural History Museum, London, is one of the best known museums internationally for its collections and research in areas of natural science, and is also one of the most popular museums in London. The Museum, which originally belonged to the British Museum, was established in 1759 on the basis that it was "not only for the inspection and entertainment of the learned and the curious, but for the general use and benefit of the public."⁴⁹ Since then, research and public education have been the museum's two core missions. In 1881, a lack of space for the British Museum's increasingly large collections meant that the natural history departments were moved to a new building in South Kensington which was renamed the

⁴⁸ Many primary school teachers use drawing to develop students' observational skills, or craft making to develop children's manipulative skills (Department for Education and Science, 1989b: 5; School Curriculum and Assessment Authority, 1996:8). The methods of developing language skills commonly used during a visit include the formulation of questions to encourage learning new vocabularies and the creation of inspiring writing related to the visit (Department for Education and Science, 1989b: 4, 1992: 2; Department for Education, 1993b: 5; School Curriculum and Assessment Authority, 1996:9-10).

⁴⁹ A statement of the 1753 Act, which gave justification for the maintenance of the Museum. Quoted in Stern (1981: 11).

British Museum (Natural Science). It was not until 1991 that the museum was officially renamed as the Natural History Museum, London (Plate 3.1, 3.2, p.79).

The museum on the site in South Kensington was purpose-built and used largely for public education. In terms of its architecture, a vast amount of space was dedicated to public display rather than to study areas for scientists, in order to allow the British public to see the museum's comprehensive collections. Furthermore, the museum building became famous for its abundant intricate carvings of animals and plants which corresponded to its natural history motifs. These figures were more than decoration; they were intended to reinforce the educational purpose of the museum (Thackray and Press, 2001: 57-59). The museum's exhibitions were meant to be attractive to the general public "who wish to obtain that knowledge...without becoming specialists or experts."⁵⁰ Each specimen exhibited was selected for a defined purpose, and was fully explained using labels, maps and sometimes diagrams. Furthermore, visitors to each gallery were provided with inexpensive guidebooks offering background information for the layman. The design of the museum in terms of its building, galleries and exhibitions seemed to be revolutionary in its day because most museums at that time looked more like storerooms stuffed with objects with badly written labels, rather than exhibitions presenting objects with clear messages to visitors (Hudson, 1987: 72).

As public education is one of its prominent missions, the museum has exerted a great deal of effort in planning educational services to facilitate visitors' learning, in addition to the exhibitions in the galleries. The museum's educational services have evolved through the decades to meet the needs and the interests of society at different times. During the 1930s and 1940s, public lectures were the museum's most important educational provision. In 1948, a Children's Century was set up, providing a series of activities especially for the young during weekends (Thackray and Press, 2001: 105). These activities for young children discarded the traditional instructional methods, and adopted more child-centred approaches aimed at providing guidance, encouraging exploration and fostering interest. During the 1950s, the museum's educational services were diversified and included activities such as films, demonstrations, and tours, in addition to special lectures.

⁵⁰ The words of Sir W. H. Flower, the former director of the Museum. Quoted in Hudson (1987: 72).

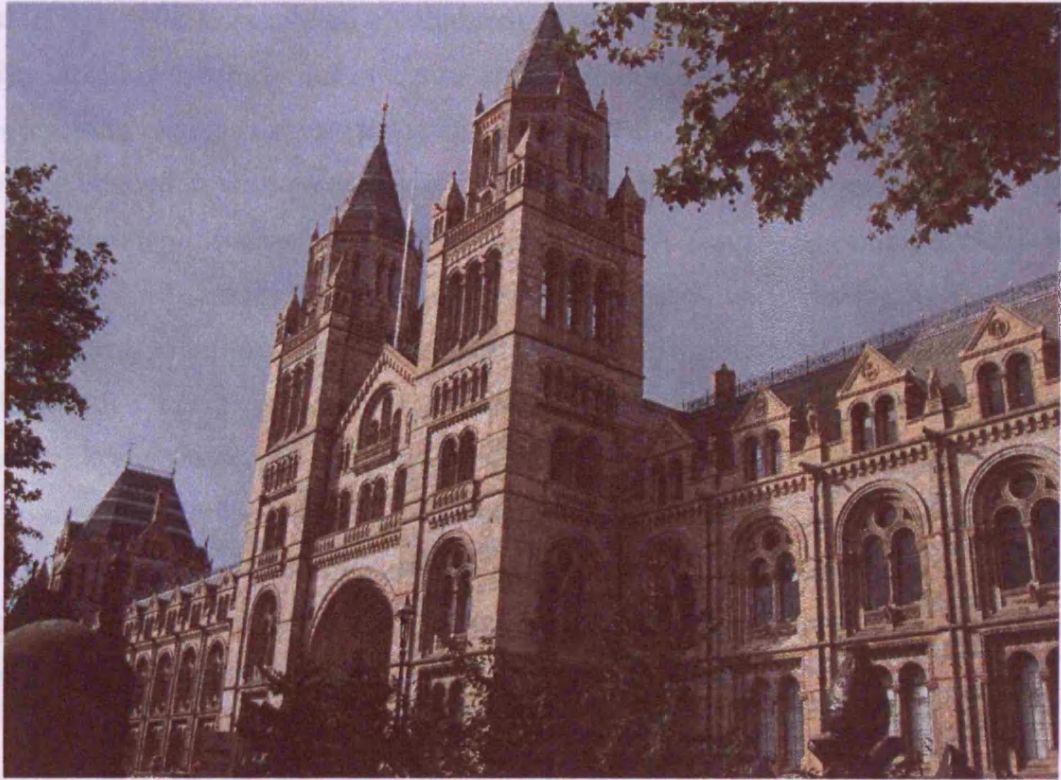


Plate 3.1 The Natural History Museum, London



Plate 3.2 Inside the Natural History Museum, London

In the 1950s-1960s, the museum became more aware of the rapid changes in society. These changes included the impact of inventive and exciting display techniques, the introduction of a new teaching approach emphasising stimulation of the learner's capacities and the trend of combining education with entertainment brought by the increasing appearance of television. Under these circumstances, the museum gradually changed its attitude from being a somewhat 'inward-looking' institution, which concentrated on imparting its research results to the audience, to an 'outward-looking' one, which was more concerned with how to make this knowledge useful and enjoyable to its visitors (Stern, 1981: 334-336). The old exhibitions were reassessed and then criticised for being too instructive and too dull. In order to improve the design of the exhibitions, several visiting tours to America and Canada were organised in the 1960s to study the new display techniques. Also a series of visitor studies was conducted in 1970-1971, aimed at understanding visitors' interests and their use of the museum's galleries and facilities (Stern, 1981: 367-369).

The museum's efforts to improve its educational function brought about several breakthroughs in the design of its exhibitions during the 1970s. First of all, a new policy for exhibitions was proposed in 1972. This new policy meant that the traditional displays based on the principles of taxonomy were replaced with a theme or story-line approach to presenting objects, aimed at making exhibitions more interesting and relevant to the visitors' lives. In 1975, the museum launched a new strategy of combining education and exhibition activities. From this point, education was no longer a separate function of the museum, and merely the design of associated activities for exhibitions. It became an integral part of the museum's work, and educational staff co-operated closely with other departments to choose objects and design exhibitions. Based on these new strategies, several new exhibitions were subsequently built during the late 1970s (Stern, 1981: 369-371). These exhibitions which used stimulating and interactive devices and delivered interesting and accessible messages to visitors proved to be very popular with the general public (Faria, 1994: 156).

The museum was not only the pioneer in developing this new type of exhibition in Britain, but most importantly, it also initiated the process of systematically assessing how effective exhibitions were for their visitors. The purpose of the museum's evaluation work was "to monitor the success of new exhibitions with a view to providing information that will help better designs for future exhibitions...(and) to obtain data about people's knowledge, opinions

and behaviour in connection with the museum's activities".⁵¹ Research directed by these concerns has been ongoing since the end of the 1970s. The research findings improve the museum's understanding of its visitors as well as enabling it to go on to create even more successful educational exhibitions. The insights from this ongoing research have shaped the museum's current educational philosophy. This philosophy is explained by Roger Miles, the former Head of the Department of Public Services at the museum, as follows:

"In the case of the Natural History Museum the new paradigm has led to a shift in emphasis (but no more than) from cognitive to affective objectives, from individual exhibits to the entire gallery as an experience, and from evaluating exhibits to learning about the audience. In the wider context the view of museums as storehouses of factual information to be memorised has been discredited and replaced by one in which they are seen as places where people find new vistas opening up and their interests awakened, so that they may be launched on paths of learning and find guidance on how to move onwards." (Miles and Tout, 1994: 105).

Today the museum states its mission as: "to maintain and develop its collections and use them to promote the discovery, understanding, responsible use and enjoyment of the natural world."⁵² It clearly echoes the museum's current paradigm as stated by Miles, demonstrating the museum's intention to enable visitors to actively use its resources for their needs and interests rather than to impose specific subject knowledge upon them. In 2002, the Department of Exhibitions and Education has been reorganised into two sections: 'Visitor and Operational Services' and 'Communication and Development'. Although the impact of this reorganisation has yet to be seen, the change may well reinforce the museum's firm intention to communicate with its visitors in order to better understand them, and based on this understanding, to further develop its educational work and services.

3.4.3.2 School Services and Study

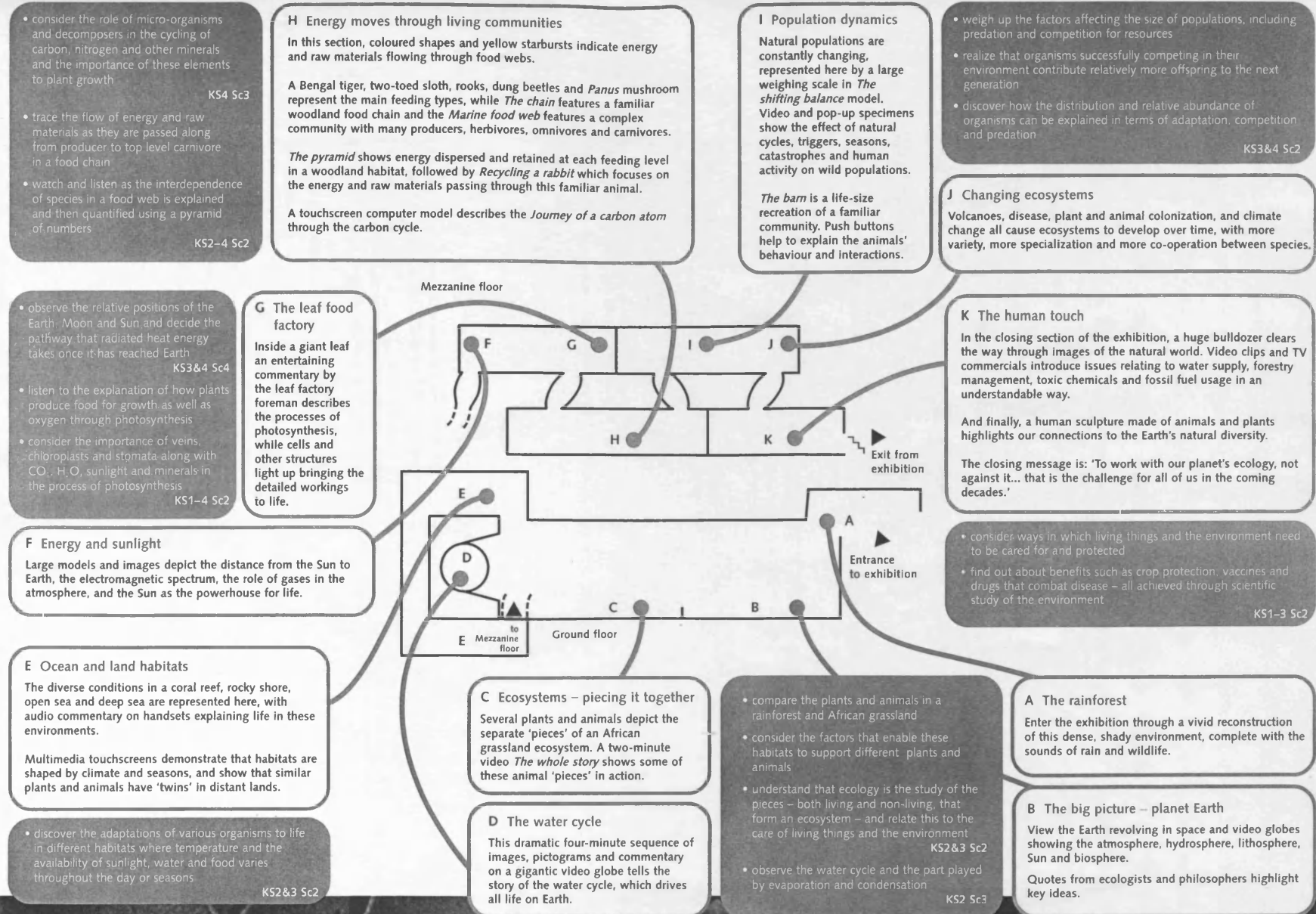
School parties have always been one key element of the museum's target audience. According to the museum's statistics in 1996/1997, the number of its school audience was about 180,000. Although the museum offers diverse workshops and educational activities, it is still difficult for every school party to get the chance to attend these programmes. Furthermore, as one of the museum's educational policies is to enable visitors to learn from

⁵¹ Quoted in Faria, M. (1994: 156-157).

⁵² Quoted in the museum's website: <http://www.nhm.ac.uk/info/index.html>, accessed April, 2002.

exhibitions and to interact with displays directly, teachers are much encouraged to lead their students themselves as they visit the galleries. To assist teachers' independent use of its resources, the museum is very keen to help teachers to plan their visits in advance. A School Booking Office has been set up for this purpose. The team in this office consists of 6-7 staff members whose responsibility is more than just taking school bookings: they also give advice to and answer inquiries from teachers. When teachers book their visits on the phone, the Booking Office will firstly ask about the purposes of their visits, and accordingly, will make suggestions about which galleries to visit, which relevant activities they could attend, what materials are available for students' use during the visits, etc. An information pack will be sent to the teachers immediately after they have made bookings, which contains important information regarding both the contents of the galleries they plan to visit, and practical details such as what to do when they arrive at the museum, where the children can rest during the visit, etc.

In order to help teachers use the exhibitions more self-sufficiently, a series of teachers' guides has been designed, the contents of which are based on the display in each gallery, detailing its location in the museum, the layout, and most importantly, how the exhibits relate to specific requirements of the National Curriculum (Figure 3.2). Furthermore, a range of activity guides has been designed to support the children's self-directed learning in the museum. Although these worksheets are for sale, the museum invites teachers to copy or tailor the sheets to their own needs.



Ecology

Figure 3.2: An example of the Natural History Museum's teacher's guide to the Ecology Gallery.
It details the layout of the gallery, the content of the display and how it relates to the National Curriculum.

In 1997, the museum's Schools Programmes section conducted a survey of teachers' opinions of the museum's school services. The results of this survey⁵³ have generated some interesting insights for further discussion. First of all, when the teachers were asked about the stage of a visit at which support from the museum's services was most useful to them, the response from a large majority of teachers was that this support was particularly welcome before and during the visit (Table 3.2). When they were asked about the kind of preparatory support that was most useful to them, 'advice and suggestions for teachers', and 'student-centred materials to use in the classroom' seemed to be most popular (Table 3.3). With regard to support available at the time of the visit itself, 'printed materials for students to use during the visit' appeared to be most useful, followed by 'teaching session' (tour, talk or workshop) with museum educators (Table 3.4).

Table 3.2

At what stage is support most useful?	Positively useful (%)	Moderately useful (%)	Not useful (%)
Before your visit (preparatory work)	85	9	2
During a visit (e.g. tours and talks)	75	13	2
After a visit (follow up work for class)	28	43	15

Table 3.3

What kind of preparatory support is most useful?	Positively useful (%)	Moderately useful (%)	Not useful (%)
Advice and suggestions for you	79	17	4
Student-centred materials to use in the classroom	77	9	6
Opportunity for individual students' questions to be answered	36	26	25
Museum education staff visiting your classroom before visit	9	19	58

⁵³ 'School Service Survey' (1997). An internal report of the Natural History Museum, London.

Table 3.4

What support is most useful at the time of the visit?	Positively useful (%)	Moderately useful (%)	Not useful (%)
A teaching session (tour, talk or workshop) with museum education staff	66	23	2
Printed materials for students to use during the visit	83	13	2
Printed advice for you or other adults with your group to use	53	32	2

Regarding the information provided by the museum, teachers tended to rate 'guidance on using each exhibition', and 'general guidance about using the museum' much more highly than 'background information about natural history' (Table 3.5). Interestingly, a very similar result was found in the question asking teachers what information is most useful to students (Table 3.6).

Table 3.5

What information is most useful to you?	Positively useful (%)	Moderately useful (%)	Not useful (%)
Background information about natural history	21	45	13
Guidance on using each exhibition	85	4	2
General guidance about using the museum	51	11	8

Table 3.6

What information is most useful to your students?	Positively useful (%)	Moderately useful (%)	Not useful (%)
Background information about natural history	40	32	4
Guidance on using each exhibition	79	4	2
General guidance about using the museum	45	23	11

The results of the survey suggest that the most important support material that teachers require is the information which can either help teachers to use the museum self-sufficiently or help students to learn more independently inside the museum. Although the teaching sessions were also rated highly by teachers, the results of the survey may well suggest that the design of services for teachers should be less subject-orientated, and more focused on

equipping teachers and students with the knowledge and skills for using the museum's resources more effectively by themselves. Significantly, the findings of this survey are in accordance with one of museum's main missions, that is, to promote visitors' "responsible use" of its resources.

3.5 Museums and Schools —A Case Study of Taiwan

3.5.1 Historical Review

Compared to the long history of association between British museums and schools, a close relationship between museums and schools began much later in the case of Taiwan. The development of this relationship has been deeply influenced by its socio-cultural context and consequently, it has progressed in a rather different way to the British case. The co-operation of museums and schools in Taiwan can be better understood by looking at the development of museums in Taiwan as discussed below.

Although it is in the nature of human beings to collect and it is commonly practised in Chinese society, the concept of a 'museum' did not appear in China until very late 19th century when it was introduced by the western world. According to Qin (1996: 32), the first museum in China was established in 1874 by a British organisation,⁵⁴ and the second one by a French minister in 1883. It was not until 1905 that the first Chinese-founded museum, the Nan Tong Museum, eventually appeared. After the new regime of the Republic of China replaced the Qing dynasty in 1911, many museums, including the Palace Museum in Beijing, were soon founded to preserve and display the aristocratic collections from previous dynasties. As a result, according to a national survey, there were more than 80 museums in Mainland China by 1936 (Qin, 1996: 34).

While museums in China were becoming established at the beginning of the 20th century, museums also started to appear in Taiwan. During the period of Japanese colonisation (1895-1945),⁵⁵ a handful of museums were set up. Apart from the Taiwan Museum which had a strong political agenda,⁵⁶ the other museums founded by the Japanese were mainly

⁵⁴ The name of the organisation was The Royal Asiatic Society, North China Branch.

⁵⁵ A more detailed history of Taiwan is discussed in Chapter 2, section 2.5.2

⁵⁶ One of the main purposes of this museum was for the Japanese government to demonstrate its westernisation and modernisation to its colonised people because museums, to Japan at that time, symbolised modernisation and westernisation. See Chen (1995, 14-17).

built for the purposes of collecting and researching objects relating to the ethnography and natural history in Taiwan (The Council of Cultural Affairs, 1996). These museums mostly belonged to universities and allowed limited public access. After Japan was defeated in the Second World War in 1945, Taiwan was returned to the Chinese government, and so were these Japanese-founded museums. However, these museums received no further government incentives or public attention because a civil war soon broke out in Mainland China; very little concern was spared for Taiwan, let alone for its museums.

Due to the civil war, China was split into two regimes, one governed by the Nationalist Party which founded the Republic of China in 1911, and the other by the Communist Party. In 1949, the Nationalist Party was defeated and ousted from Mainland China to Taiwan. Before and during this retreat, the Nationalist government started to bring some of the most important Chinese collections from the museums in China to Taiwan. When the Nationalist Party rebuilt its regime in Taiwan, several museums were established during the 1950s to 1960s to preserve these collections. One of them was the Palace Museum in Taipei which houses a collection mainly from the Palace Museum in Beijing, China.

The museums founded at this time had a dual mission. As well as serving the purpose of conservation, they were a showcase for displaying unique Chinese collections to both the Taiwanese public and to the world, to demonstrate the Nationalist Party's legitimate inheritance of Chinese culture. The second mission was particularly important as the Communist regime was gradually being accepted by the political world, and moreover, the Cultural Revolution had severely damaged traditional Chinese culture during the 1960s and 1970s. The Palace Museum, Taipei, has been the most successful example of the fulfilment of these two purposes. Since its establishment, the primary mission of the museum has been the promotion of national image and Chinese culture. Therefore, the museum has specifically targeted foreign visitors and international scholars of Chinese culture as its primary audience. As a result, the services for these foreign visitors, such as guided tours, became the most important provision for the museum services. In spite of this, the museum had a weaker link with the general public in Taiwan: there were no clear policies, specific programmes or activities provided for them. In addition, with a strong political agenda and research purpose, the communicative approach of the museum was either very didactic or aimed at the level of connoisseurs. Therefore, the museum normally projected a superior and remote image to the local public. Although school visits to the museum were

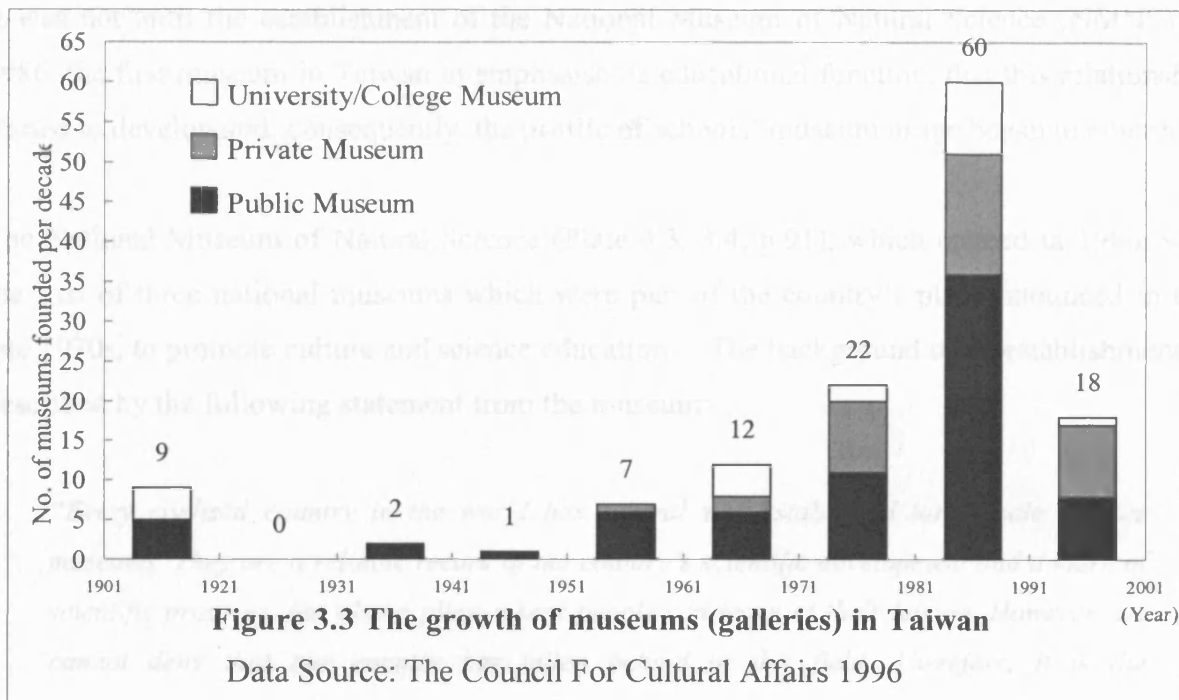
encouraged, children often felt intimidated and left with a negative impression, as recalled by some researchers many years later (Chen, 1995: 81-82; Qin, 1992: 213).⁵⁷

In the 1970s, with the improved political stability and rapid economic growth in Taiwan, the government began to be aware of the important contribution of cultural and social education to the quality of life of the population as well as economic competence of the nation. In response to this concern, a national project for the promotion of cultural establishments was launched in 1977. Throughout the following decades, many cultural centres and art museums were built at the local level to promote cultural activities, while three national museums, namely the National Museum of Natural Science, the National Museum of Science and Technology, and the National Museum of Marine Biology and Aquarium, were built to promote science education. It is estimated that 25 museums, galleries, and cultural centres were formed as a result of this project (The Council for Cultural Affairs: 1996). As public museums and galleries in Taiwan are aimed to be part of the mechanism of social education, they are under the governance of either the Ministry of Education or local educational authorities, depending on their individual status.

The launch of this cultural project led to the rapid development of museums in Taiwan during the following decades (Figure 3.3, p.89). The emergence of public museums and galleries also stimulated the growth of private museums and galleries. According to the latest survey made by the Council of Cultural Affairs, there were 131 museums and galleries in Taiwan by 1996. It is widely recognised that the 1980s was a new era of museum development in Taiwan, in terms of both quantity and quality. The museums established as part of this project have sufficient financial aid and government support. Therefore, they normally have grand images, in terms of the large scale of the buildings, modern designs and the latest facilities, which immediately attract people's attention. It is interesting to note that, unlike museums which are founded for the preservation of existing collections, many of the museums built under this government policy were founded prior to the accumulation of collections. Despite their limited collections, these museums were keen on using a marketing approach to promote their images and attract visitors: blockbuster exhibitions or international fairs were often organised, which were combined with appealing designs, entertaining activities, and most importantly, media promotion (Chen, 1995: 85-88; Qin,

⁵⁷ Very few formal studies regarding students' museum experiences have been conducted, so this comment is based on personal recollections or impressions of some of the researchers.

1992).



These museums with their new images and new communicative approaches successfully developed a new relationship with visitors. Their success also forced the traditional types of museums to improve their services. Visiting museums soon became a popular leisure trend, which not only created new experiences for frequent visitors but also attracted a lot of first-time goers. The popularity of visiting museums can be demonstrated by a recent survey conducted by the Tourism Bureau in 2000, which shows that the top three tourist attractions in Taiwan in order are Taipei Zoo, the National Museum of Natural Science and the National Palace Museum (Tourism Bureau, 2001).⁵⁸

3.5.2 Case Study --- the National Museum of Natural Science (NMNS), Taichung

In reviewing the relatively short history of museum development in Taiwan, it is sufficient to comment that a close relationship between museums and schools just began to form after the 1980s. Although school visits to museums had occurred beforehand, they were not taken

⁵⁸ The sample of the survey included tourist attractions founded by both public and private sectors, but excluded natural resorts such as national parks. According to the survey in 2000, the number of visitors to Taipei Zoo was 5,489,498, the number at the National Museum of Natural Science was 3,829,824 and the number at the National Palace Museum was 1,976,921. Source from Tourism Bureau, 'Tourism Trends' web page, available at http://www.tboc.gov.tw/admn_info/user/mp5.htm (Accessed March, 2001).

seriously by the museums, and very few records and studies on this subject can be found.⁵⁹ It was not until the establishment of the National Museum of Natural Science (NMNS) in 1986, the first museum in Taiwan to emphasise its educational function, that this relationship started to develop and, consequently, the profile of schools' museum usage began to emerge.

The National Museum of Natural Science (Plate 3.3, 3.4, p.91), which opened in 1986, was the first of three national museums which were part of the country's plan announced in the late 1970s, to promote culture and science education. The background of its establishment is described by the following statement from the museum:

"Every civilised country in the world has several well-established large-scale science museums. They are a reliable record of the country's scientific development and a mark of scientific progress, but also a place where people can learn at their leisure. However, we cannot deny that our country has fallen behind in this field. Therefore, it is the responsibility of the National Museum of Natural Science to promote the development of the science and culture of our country to an international level." (NMNS 1984)

From this statement, it is clear that the museum is purpose-built, with a strong educational duty to fulfil. In order to promote science education at a national level, it was decided to locate the museum in the city of Taichung, the third biggest city, geographically situated in the middle of Taiwan. This location makes it convenient for visitors from either the northern or southern parts of Taiwan to visit the museum.⁶⁰ Furthermore, in order to be comparable to other museums on an international level, the scale of the NMNS is huge and the scope is comprehensive. As the museum is the first project of its kind in Taiwan in terms of its scope and mission, successful examples of natural science museums abroad were extensively referred to, particularly the Natural History Museum in London.⁶¹

⁵⁹ According to Chen (1995:115-116), museum visitor studies start to emerge in Taiwan during the 1990s. Before that, only three visitor studies are to be found.

⁶⁰ Normally, it is about two to three hours of driving from either the northern or southern part of Taiwan to the city of Taichung.

⁶¹ For example, The Life Science Hall in the NMNS was designed by a renowned British museum designer, James Gardner, who also had designed exhibitions for the Natural History Museum, London, as well as several other museums around the world.

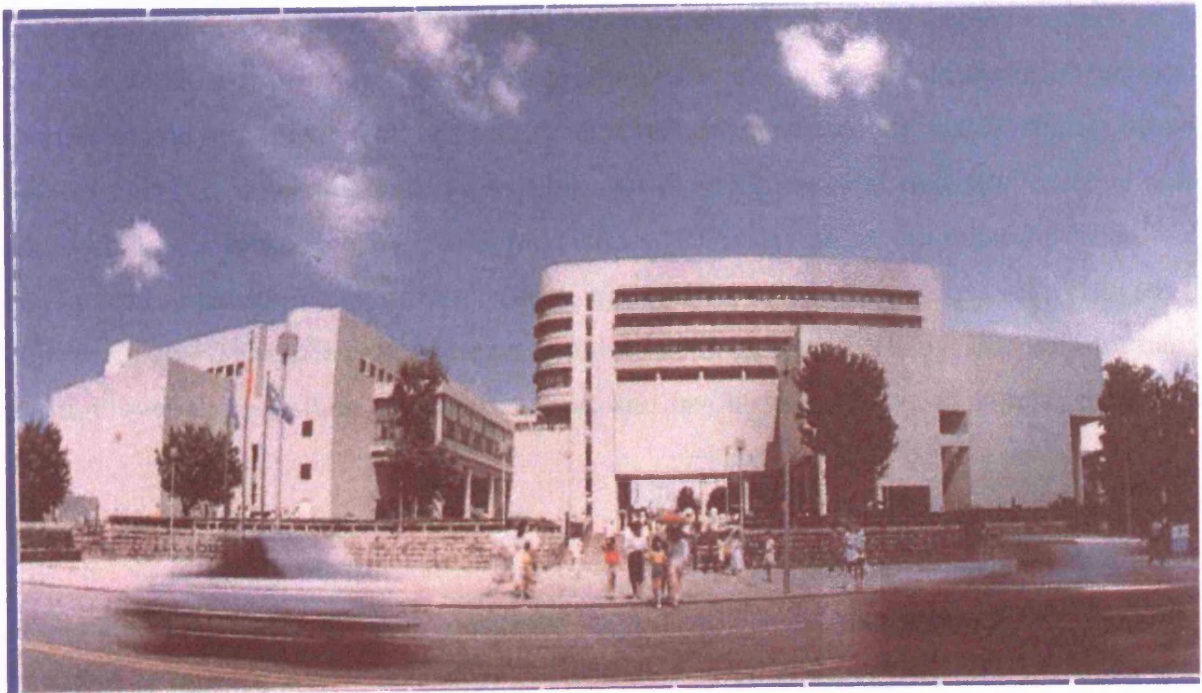


Plate 3.3 National Museum of Natural Science, Taichung (source from NMNS)



Plate 3.4 Inside the National Museum of Natural Science, Taichung

Learning from the western experience, the museum has adopted a narrative approach, instead of an arrangement based on the traditional classification of objects, to display exhibits so that visitors can learn from story lines which are more interesting, vivid and closer to their daily lives. Moreover, interactive and multimedia displays are widely used, combined with devices such as demonstrations, workshops, and three-dimensional theatres, to create active and stimulating learning experiences for visitors. The design of the museum successfully engages the interests of the public. Most importantly, its new image has also changed the attitudes of the Taiwanese public towards museums in general. Today, the museum has on average over three million visitors per year, and has become the most popular museum in Taiwan.

The NMNS is widely regarded as the essential landmark for museum development in Taiwan as well as the model for later museums to follow. Among its various contributions, a devotion to helping school education is certainly one of its most fruitful. Under its grand scheme of promoting science education, the museum particularly targets school students, especially primary and secondary school children, as its main audience as a way of sowing an interest in science amongst young visitors. From the outset of its construction, the museum's paramount mission has been: "To explain the theories and phenomena of natural science and provoke scientific interest among the public. This would also help schools of all levels to achieve their educational goals, and form the basis of the long term development of natural science"(NMNS, 1993).

To achieve this goal, many displays in the museum are aimed at the levels of primary and secondary school children (Chang, 1987, 132-137; Qin, 1992: 214; Chen, 1995: 83). This is also the case with the museum's educational activities, although for the general public, "the design is mainly geared towards school children and family outings."(NMNS, 1993: 12). The educational activities are full of variety, including guided tours, scientific workshops, lectures, demonstrations and classroom theatres. Among these activities, guided tours, which employ 50-60 full-time educators, are the biggest educational provision in terms of the number of staff. More specific links with schools are also made by producing worksheets for children, as well as videotapes and a series of publications which provide information helping teachers to use the museum.

The museum also has active outreach programmes to strengthen its connections with schools around the country. Normally, these programmes are implemented with the assistance of local educational authorities under the guidance of the Ministry of Education, which is in charge of public museums and galleries. For example, in order to introduce the idea of museum education to schools for the first time, the museum, with the help of local educational authorities, successfully invited hundreds of school principals and teachers to attend conferences on this issue (Qin, 1992: 58).⁶² By the same means, the museum has so far recruited about 1500 voluntary teachers from schools to act as a bridge between the schools and the museum.⁶³ These teachers will regularly receive the latest information about exhibitions and educational events from the museum so that they can distribute the information to their colleagues.

3.5.2.1 School Visits to the NMNS

In order to offer more appropriate services, the museum has carried out several visitor studies since its opening, some of which provide useful insights into the museum's school audience. Large scale visitor surveys were subsequently conducted by the museum during the Chinese New Year holiday in 1990 and during school term-time in 1991 (Liou, 1992). In order to compare the profiles of visitors who came to the museum at different periods of time, these two surveys used very similar questions in order to make their results comparable. Surprisingly, the results had many similarities as discussed below.

The biggest concern of these two studies was the profile of the museum visitors in terms of their occupations. The result of the 1990 study showed that the majority of the visitors (58.5%) were students, including school children (Figure 3.4, p.94). In the 1991 survey, the result provided more details, suggesting that primary school children formed the largest group of the museum audience (29.7%), and that junior high school children formed the second biggest group (14%). Overall, this means that 43.7% of the museum audience in 1991 was made up of primary and junior high school children (Figure 3.5, p.94).

⁶² The first conference was attended by more than five hundred school principals. At the second series of conferences, more than two thousand school principals and natural science teachers attended.

⁶³ According to the statistics of the Ministry of Education (2001: 53), the total number of primary and junior high schools in Taiwan in 2001 was 3309.

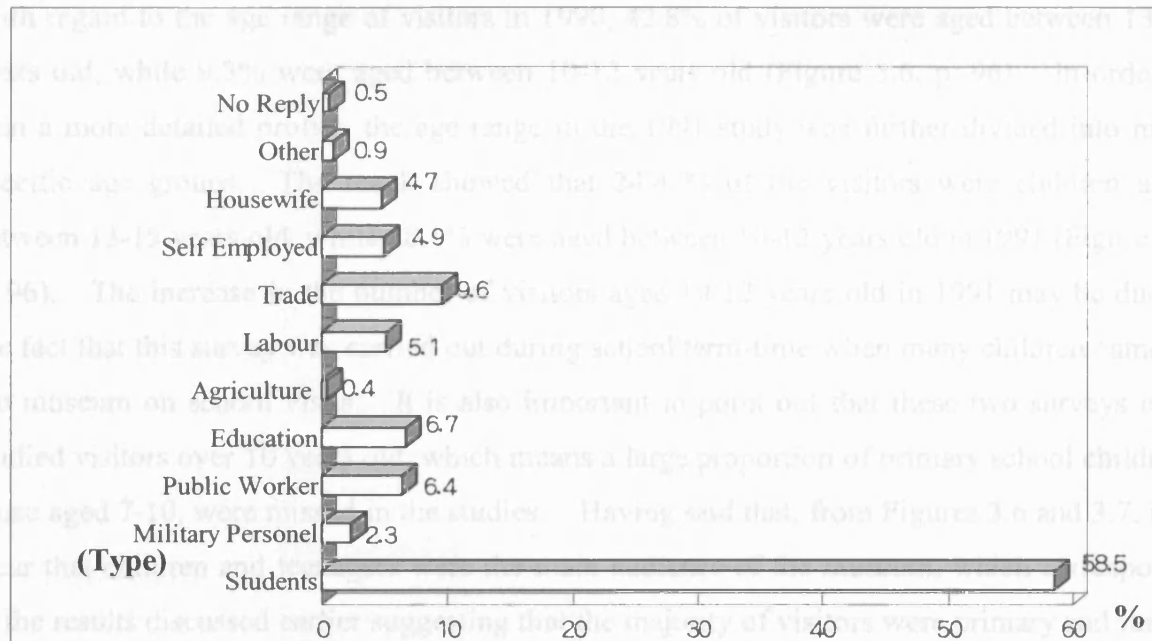


Figure 3.4 OCCUPATIONS OF VISITORS
(Visitor Survey During the Chinese New Year Vacation, 1990, No.=1909)

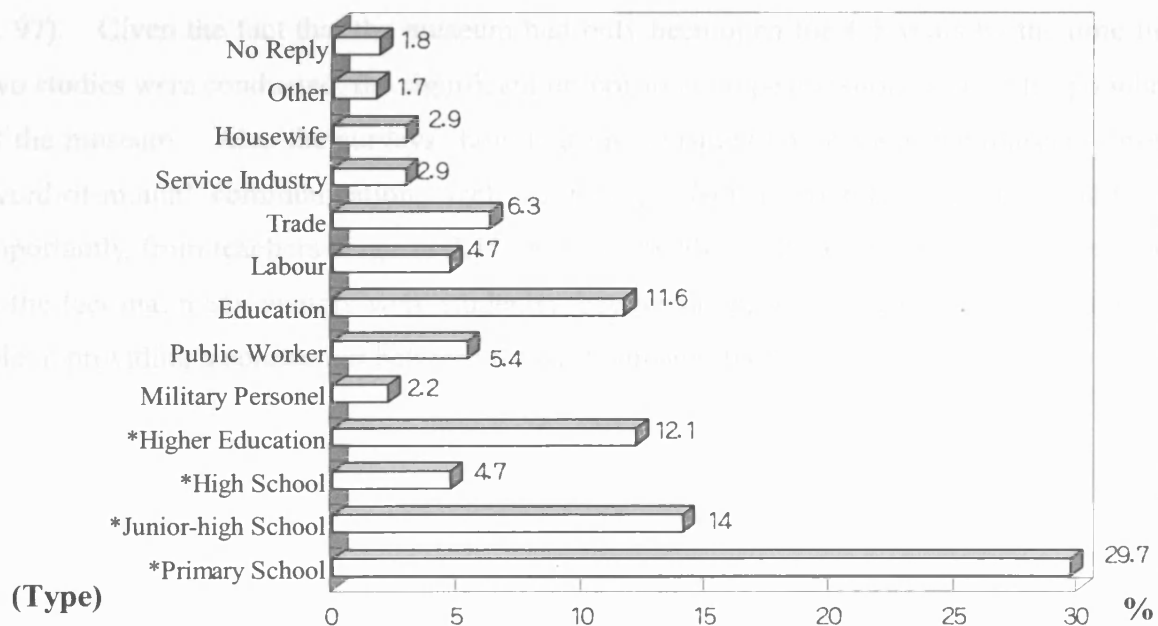


Figure 3.5 OCCUPATIONS OF VISITORS
(Visitor Survey During School Term-Time, 1991, No.=1140)

Notes: 1. The sign '*' refers to students in different education levels.
2. In Taiwan the normal age range of students in Primary School are from 7-12/13, in junior-high school are from 13-15/16, in high school are from 16-18/19, and in higher education are over 18.

With regard to the age range of visitors in 1990, 42.8% of visitors were aged between 13-20 years old, while 9.3% were aged between 10-12 years old (Figure 3.6, p. 96). In order to gain a more detailed profile, the age range in the 1991 study was further divided into more specific age groups. The result showed that 24.4 % of the visitors were children aged between 13-15 years old, while 18.1% were aged between 10-12 years old in 1991 (Figure 3.7, p. 96). The increase in the number of visitors aged 10-12 years old in 1991 may be due to the fact that this survey was carried out during school term-time when many children came to the museum on school visits. It is also important to point out that these two surveys only studied visitors over 10 years old, which means a large proportion of primary school children, those aged 7-10, were missed in the studies. Having said that, from Figures 3.6 and 3.7, it is clear that children and teenagers were the main audience of the museum, which corresponds to the results discussed earlier suggesting that the majority of visitors were primary and junior high school students.

Most of the people questioned in these two studies were visitors who had come more than once since the museum's opening, with 65.4% in 1990 and 58.6% in 1991. Moreover, a large number of visitors had come to the museum more than five times (Figures 3.8 and 3.9, p. 97). Given the fact that the museum had only been open for 4-5 years by the time these two studies were conducted, the significant proportion of repeat visitors implies the popularity of the museum. Also the surveys show that most visitors knew about the museum through 'word-of-mouth' communication, such as through family, friends, classmates and most importantly, from teachers (Figures 3.10 and 3.11, p. 98). These results not only correspond to the fact that many visitors were students; they also indicate that teachers play an essential role in providing a connection between the museum and students.

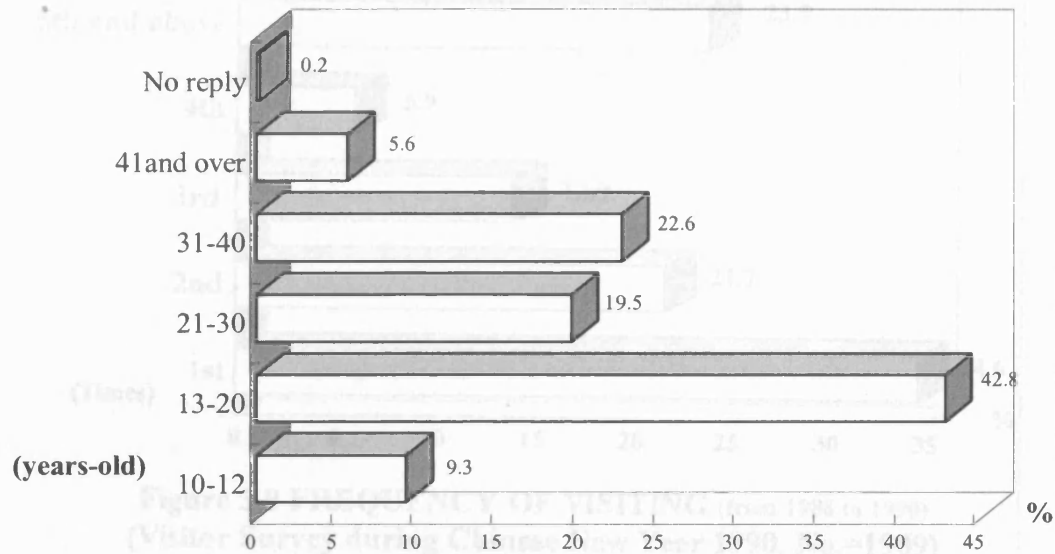


Figure 3.6 THE PROFILE OF AGE RANGE OF MUSEUM VISITORS
(Visitor Survey During Chinese New Year 1990, No.=1909)

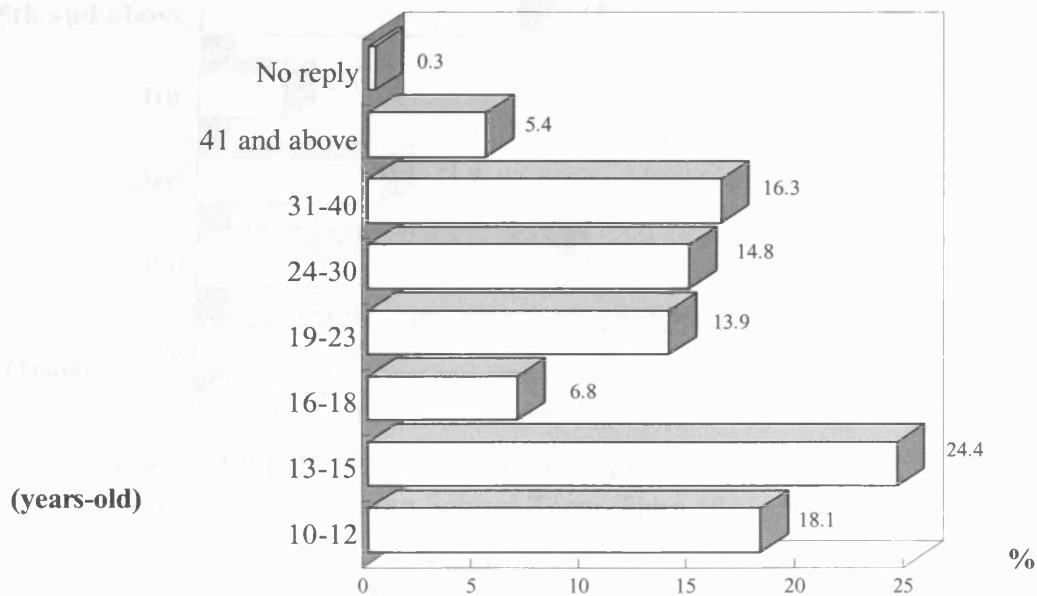
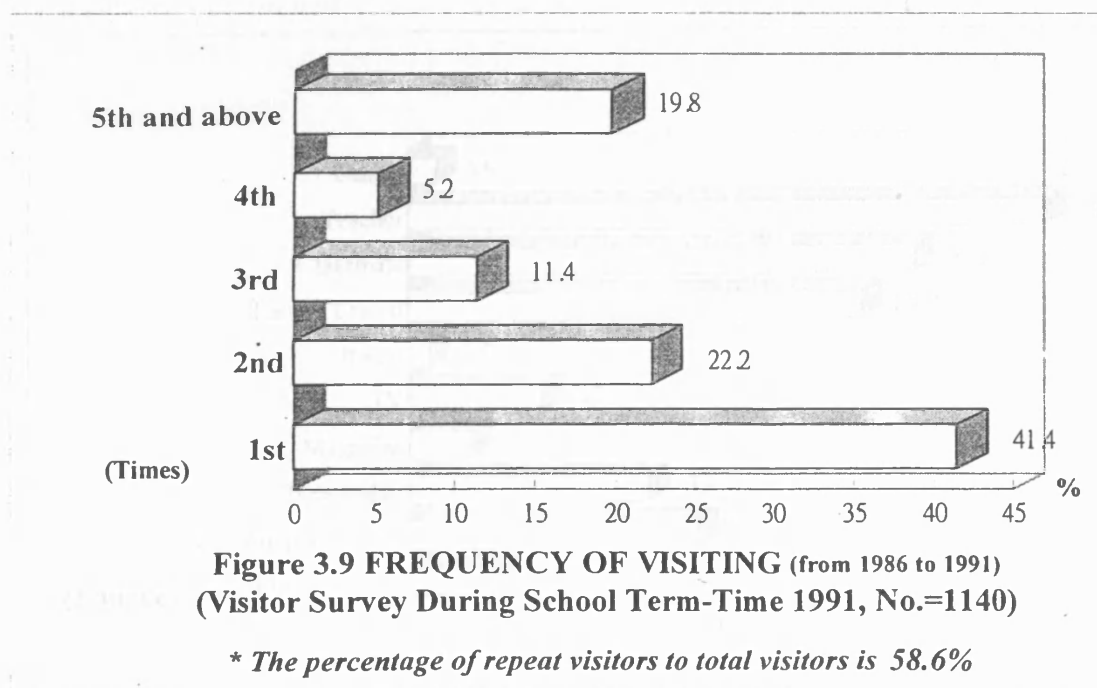
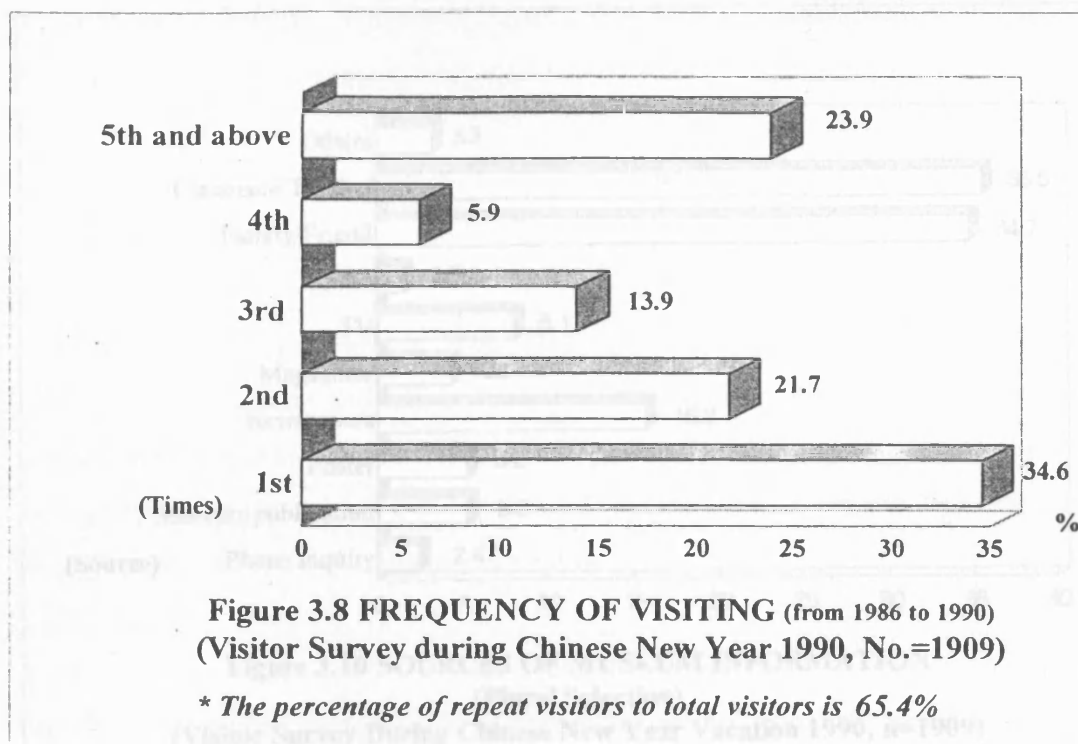
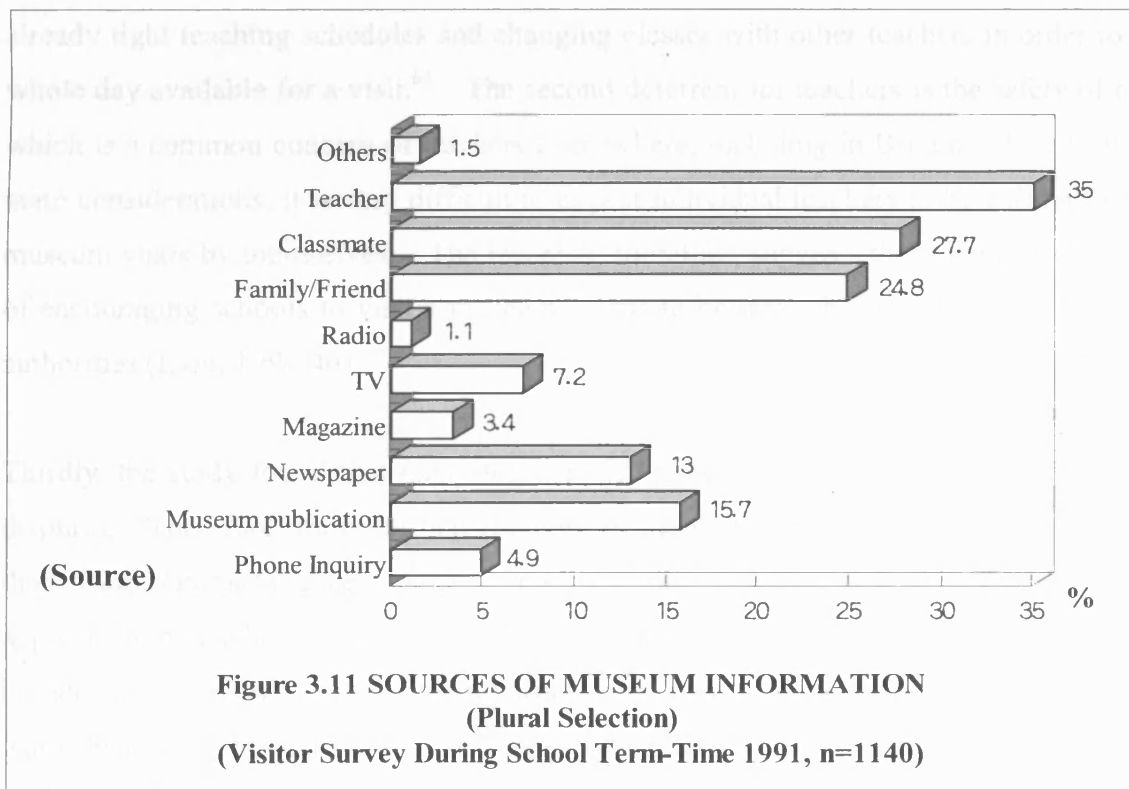
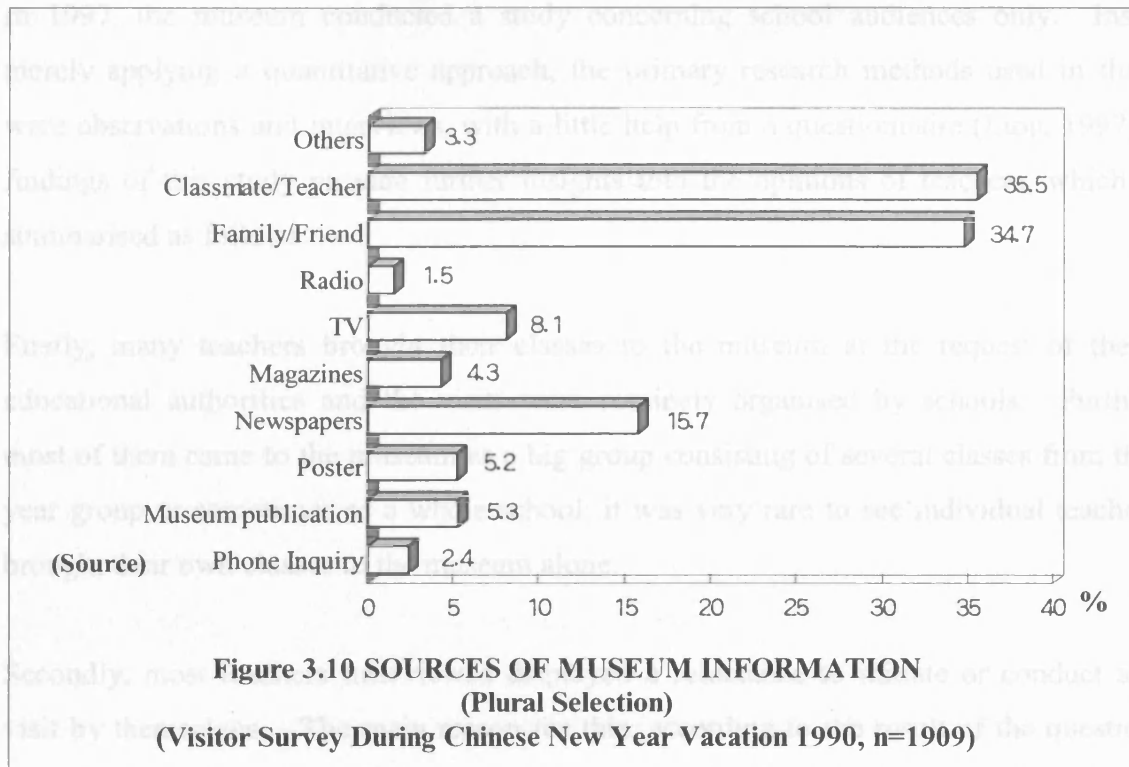


Figure 3.7 THE PROFILE OF AGE RANGE OF MUSEUM VISITORS
(Visitor Survey During School Term-Time 1991, NO. =1140)





In 1997, the museum conducted a study concerning school audiences only. Instead of merely applying a quantitative approach, the primary research methods used in this study were observations and interviews, with a little help from a questionnaire (Liou, 1997). The findings of this study provide further insights into the opinions of teachers, which can be summarised as follows.

Firstly, many teachers brought their classes to the museum at the request of their local educational authorities and the visits were routinely organised by schools. Furthermore, most of them came to the museum as a big group consisting of several classes from the same year group or sometimes as a whole school; it was very rare to see individual teachers who brought their own classes to the museum alone.

Secondly, most teachers interviewed displayed a reluctance to initiate or conduct a school visit by themselves. The main reason for this, according to the result of the questionnaire, was the difficulty of scheduling a museum visit. As the interview data further revealed, organising a visit creates a number of problems for teachers, including sparing time from their already tight teaching schedules and changing classes with other teachers in order to make a whole day available for a visit.⁶⁴ The second deterrent for teachers is the safety of children, which is a common concern of teachers everywhere, including in Britain. Due to these two main considerations, it is very difficult to expect individual teachers to be willing to organise museum visits by themselves. The research, therefore, suggests that the most effective way of encouraging schools to visit a museum seems to be through requests of local educational authorities (Liou, 1997:46).

Thirdly, the study found that many teachers felt unfamiliar with the content of the museum displays. Therefore, they felt that teaching in the museum was not their responsibility but that of the Natural Science teachers at their schools. Furthermore, although teachers highly appreciated the educational benefits of the museum in more general terms, such as the broadening of students' horizons, they were doubtful about how much children could actually learn from a visit. This doubt is clearly illustrated by one teacher's statement: "I know nothing about the exhibition. Teachers have very limited knowledge about displays in the

⁶⁴ In Taiwan, primary school children from the third to the sixth grades are taught by specialist teachers in several subjects, such as Natural Science, Art, Music, etc. In this case, children normally will have different subjects taught by different teachers in one day. Arranging a visit therefore involves shifting classes between teachers in order to make a day totally free.

museum. I feel that we came here to watch the crowd, not to learn. Students make a lot of noise, which is very disturbing” (Liou, 1997: 42). Due to this kind of attitude, most teachers expressed that they would prefer parents, rather than schools, to bring children to the museum (p. 42). It was also commonly observed that teachers had done little preparation for students and themselves before the visits (p. 41).

The National Museum of Natural Science is a landmark in the development of museums in Taiwan in many respects, particularly in its pioneering work with school education. With government support, especially from the Ministry of Education, and the aid of local educational authorities, the museum quickly formed a relationship with schools. The results of the two visitor surveys discussed above clearly illustrate the popularity of the museum among students, as well as indicating the importance of teachers in forging this positive relationship. Having said that, the result of the qualitative study implies that the high quantity of school visits may not be matched by a high quality in their museum experiences. Most teachers who brought students to the museum seemed to be merely fulfilling the minimum requirement of educational authorities, rather than considering the educational value of a museum visit. This indicates that what the museum and educational authorities expect from teachers may be rather different from what teachers perceive their duty should be in using a museum. This raises important questions regarding what teachers’ perceptions and expectations of museum visits really are and how their ideas are developed in their school contexts. All these questions will be closely investigated in the Taiwanese case studies summarised in Chapter 6.

Conclusion

As one of the objectives of this thesis is to explore teachers’ opinions and experiences of using museums to facilitate teaching at school, it is important to study how museum education has been associated with school education. This chapter provides a broad review on this topic from various aspects. Section 3.1 outlines how the relationship between museums and schools was initiated and developed through the centuries. It also provides a standpoint for understanding where this relationship may lead to in today’s context. 3.2 reviews the overall profile of museum visitor studies to date. Based on this profile, it suggests a need of including the qualitative approach in the field of museum evaluation, which justifies the use of such an approach in this thesis. 3.3 distinguishes museums’ unique educational potential

from that of schools. It also helps to discern the different agendas of museums and schools, which provides grounds to consider how to form a sound partnership between these two educational institutions.

Sections 3.4 and 3.5 discuss the relationship between museums and schools in the specific socio-cultural contexts of England and Taiwan. Moreover, these two sections include background information on the Natural History Museum and National Museum of Natural Science in terms of their educational approaches and their association with schools. These set the context for the presentation of the case studies following in the next few chapters. Before introducing the case studies, the next chapter will firstly discuss the methodological issues regarding the data collection and analysis applied in this thesis.

CHAPTER 4

METHODOLOGY

Introduction

This chapter explains and justifies the methodological approach used in this theses. A qualitative, case study approach is employed in this study for its unique ability to illustrate a subject's viewpoint in his/her life context--- in the case of this research, the teacher's views and experience of museum visits in his/her school context. The distinctive nature of this approach and the ways in which it differs from quantitative methods are clarified. Furthermore, how this approach is best suited to my research questions, and how it is designed to accommodate to the objectives of this research are explained. Finally, the strategy and process of data collection and data analysis are described in detail in this chapter.

4.1 The Research Design--- Its Aims, Objectives and Methodology

The aim of this research is to enhance the understanding of primary school teachers' museum agendas and museum experiences in English and Taiwanese schooling contexts. Therefore, there are three main objectives that this research aims to achieve: firstly, to investigate how English and Taiwanese teachers' museum agendas are formed in their school contexts; secondly, to examine the English and Taiwanese teachers' museum experiences and the impact of their agendas on these experiences; thirdly, to compare English and Taiwanese teachers' museum agendas and experiences, and to further understand their differences or similarities from a perspective of schooling in both England and Taiwan.

To achieve the first and second objectives, this research selects one museum from each country to compare how local primary school teachers use it for a school visit. The museums chosen are the Natural History Museum, London and the National Museum of

Natural Science in Taichung.⁶⁵ For each museum, three teachers' experiences of conducting a museum visit are examined in detail and each of their experiences serves as a single case study. As far as an individual teacher's experience is concerned, this experience is not limited to the visit to the museum itself, but also includes the work carried out in the school context, such as the development of his/her museum agenda, the preparation before the visit, the follow-up work and comments afterwards. In other words, each case study investigates the whole process of the museum visit in the school context. In addition to recording the teacher's museum experience at every stage, the case study also examines the influence of the teacher's agenda on this experience.

To achieve the third objective of this research, a comparison of the English and Taiwanese case studies is made in order to highlight the differences and similarities between them. As my research tries to explain these differences and similarities from the perspective of schooling contexts, another essential task for this research is to establish an in-depth understanding of English and Taiwanese educational cultures and systems, so as to ensure that the interpretation of my research findings is compelling and pertinent. For this purpose, a literature review relevant to this topic was conducted throughout the process of this research, and is summarised in Chapter 2. This literature review provides broad contexts of English and Taiwanese schooling for the exploration of the case studies being conducted. It later also serves as a theoretical framework to interpret the findings of the case studies.

Thus, the methodology used in this research is that of a qualitative case study: its key characteristics are that it is exploratory, descriptive, interpretative, context-bound and full of personal insights of the subject studied. Before providing a further analysis of how each case study was conducted and what methods were used, it is necessary to clarify the nature of the qualitative case study on which the design of my research methodology was based.

4.2 The Choice of Qualitative Case Study Approach

4.2.1 The Nature of Qualitative Research

Creswell (1994: 1-2) has defined qualitative research as "an inquiry process of understanding a social or human problem, based on a complex, holistic picture, formed with words,

⁶⁵ The criteria for choosing these two museums will be discussed in section 4.3.2.1

reporting detailed views of informants, and conducted in a natural setting.” This approach has often been presented in contrast to quantitative research due to their fundamentally irreconcilable views of the world. Quantitative research, which is associated with the ‘traditional’ or ‘scientific’ paradigm, is based upon the assumption that there exists an absolute reality which can be measured objectively and is independent of the researcher. This reality is regarded as being as objective and solid as the laws of the physical world, so it can be understood by identifying its constituent elements and examining their causal relationships. Hence, the goal of quantitative research is to find out or to confirm the regularities of these causal relationships by means of statistical measurements. Furthermore, results are expected to be generalised as a singular truth which can be applied to any people in any context. In order to produce results that can be generalised, quantitative researchers have to carefully select their samples as well as design rigid experimental models using methods and outcomes that should seek to avoid the researchers’ personal influence.

In contrast, qualitative research, which is often associated with the ‘naturalistic’ paradigm, assumes that reality is individually constructed. Thus it is multiple, complex and ever-changing. Based on this worldview, the goal of qualitative research is not to measure or to confirm an objective fact, as assumed by quantitative research, but to understand those subjective meanings assigned or perceived by individuals. In other words, qualitative research tries to see reality through people’s eyes. The necessity of including subjective viewpoints in understanding reality is persuasively argued by Schutz.⁶⁶ He says that when a researcher studies molecules, (s)he does not have to care about what the world ‘means’ to the molecules. But when a researcher tries to understand the reality of a human being, it is an entirely different concern. He stresses that the only way to understand a social reality is through the meanings that people give to that reality.

While qualitative research is interested in diverse meanings given by people, researchers also seek to understand the process of meaning-making --- how people make sense of the world around them, which leads to different interpretations of social realities. For this purpose, researchers are required to study people in real life contexts rather than in rigidly controlled conditions such as in laboratory experiments. Furthermore, because there is no fixed approach which can predict spontaneously occurring events or actions, the research is heavily

⁶⁶ Quoted in Bernard (1994: 15)

reliant on researchers who can promptly respond to the evolving situation by selecting proper methods or designing appropriate procedures. Nor can pre-determined inventories describe the tacit and elusive domain of realities such as intuition or feeling. Thus, researchers have to be sensitive to subtle meanings which go beyond words, such as suggestive expressions or non-verbal behaviour. Accordingly, the nature of the research process is flexible and exploratory, in which researchers are the key instruments for collecting and interpreting the data. In this sense, the subjectivity of a researcher is rightfully recognised. Furthermore, as the interest of qualitative research lies in process and meaning, its reporting is often presented in a descriptive manner which details the process of the phenomenon investigated and quotes people's personal accounts to illustrate the meaning of their experience. Moreover, the analysis of its data is mainly inductive, as it does not confirm or refute a theory, but provides possible explanations by building its own theory or finding other theories to explain the social phenomenon studied.

Although the term 'qualitative research' is frequently used as an opposite to quantitative research, it is actually "an umbrella term" for various research designs associated with different disciplines and traditions (Glesne & Peshkin, 1992: 9). Many researchers have tried to classify qualitative research into certain categories. For example, Lancy (1993)⁶⁷ categorises qualitative research into seven research types, namely anthropological perspectives, sociological perspectives, biological perspectives, case studies, personal accounts, cognitive studies and historical inquiries. Another classification is made by Creswell (1998) who organises qualitative research into five traditions: biography, phenomenology, grounded theory, ethnography and case study. Although there is no definite classification for qualitative research yet, it is assumed that each research type as classified by researchers has its own characteristics in terms of its association with certain research purposes and preferred data collection procedures and methods.

4.2.2 The Choice of the Case Study Approach

Among various research types in qualitative research, the case study approach is chosen for this study because of its appropriateness for my research questions. As Robson (1993: 38) suggests, the basic principle for selecting a research design is that it "must be appropriate for the questions you want to answer". The case study approach is often applied when "a 'how'

⁶⁷ Quoted in Creswell, J. W. (1998: 6).

or ‘why’ question is being asked about a contemporary set of events over which the investigators have little or no control.” (Yin, 1994: 9). Such an application is well-suited to my research questions regarding how and why English and Taiwanese teachers use museums in their school contexts and in which the teachers’ experiences are not controlled by researchers but naturally occur during the period of this study.

There are other features which distinguish the case study from other research approaches, as well as justifying it as the most pertinent choice for this thesis. The most important characteristic of the case study, as its name suggests, is having a ‘case’ which can be clearly identified as the focus of the investigation (Merriam, 1988: 9; Creswell, 1998: 61). The precise identification of a case will help researchers to achieve the ultimate goal of this approach--- that is, to investigate a case in a great depth, providing a holistic, intensive description and analysis. Although researchers may have a single case or multiple cases within a study, the key principle in either research design is that each case should concentrate on inquiring into a single phenomenon or entity such as an event, a programme, a person or a process (Merriam, 1988: 9-10).

As for how to define an appropriate case, Yin (1994: 23) suggests that it results from “accurately specifying the primary research questions.” If questions are too vague or too numerous, making it difficult to favour a single case analysis, researchers may have problems conducting their case studies. In addition to a clear focus for investigation, it is also suggested that a ‘case’ should be a “bounded system”, which is bound within a specific time and place (Cresswell, 1998: 61; Yin, 1994: 24).

The clear boundary of a case in terms of a research focus, time and place is one of the most appealing characteristics of the case study: it is, however often confused with the ethnographic approach. Unlike a case study which has a specific focus of inquiry, ethnography assumes “a holistic outlook in research to gain a comprehensive and complete picture of a social group” (Fetterman, 1988: 29). Because of this holistic orientation, ethnographers attempt to describe the cultural or social group as fully as possible; they also have to remain in the field for a prolonged period of time and to collect data from various locations in order to establish a holistic cultural portrait (Fetterman, 1988: 29). In contrast, as the goal of a case study is to examine a phenomenon in great depth, the research process is guided by a specific research question and its fieldwork is carried out in a “targeted

fashion”--- that is, researchers spend a certain length of time on more circumscribed locations to collect data deemed relevant to the phenomenon studied (Yin, 1993: 46).

In this thesis, although the research design contains multiple case studies, each case has a specific focus of investigation--- that is, to examine a teacher’s experience of conducting a museum visit. In addition, I remained in the field within a specific time frame, that is around the period when the visit was conducted. My field work was also carried out in specific geographic areas: schools and museums chosen for the study. Given the above considerations, I regard this study as having a case study research approach rather than being an ethnographic study, although it does share some common features with ethnographies such as participant observation and socio-cultural interpretations of the phenomena.

Another characteristic of the case study is its inclusion of the context. Yin (1993: 31) suggests that the major rationale for selecting the case study approach is because researchers “must cover both a particular phenomenon and the context within which the phenomenon is occurring.” A similar view is also expressed by Sanders (1981: 44) who writes: “Case studies help us to understand the processes of events, projects, and programmes and to discover context characteristics that will shed light on an issue or object.”⁶⁸ Further reasons as to why the context must be included in a study are given by Yin: it is because the phenomenon studied is really embedded into its context, or the context is assumed to contain important explanations regarding the phenomenon (Yin, 1993: 31).

Taking this research as an example, the context indeed plays an essential role in describing and analysing my case studies. As a museum visit conducted by a teacher is regarded as part of school lessons, it can be better examined in its school context in order to see how it relates to school life and the lessons. Furthermore, it is suggested that the ways in which a teacher uses the museum is profoundly influenced by his/her experience and expectations, which are mainly developed in the school context. In this sense, the school context in which the teacher’s experience and expectations are formed is highly pertinent to the explanations of the teacher’s museum experience. A similar logic can also be applied when a teacher’s experience is examined in the broader schooling context, that is, a teacher’s experience of using museums is embedded in the context of schooling and will inevitably be conditioned by

⁶⁸ Quoted in Merriam (1988: 32).

factors such as the educational ideology, policy or curriculum. Hence, the perspective of the schooling context can definitely shed some light on this experience.

Because of the inclusion of both the phenomenon and its context, the end product of a case study is often presented as a rich description of the case. This richness implies that the study cannot merely rely on one single source of data but will likely need multiple sources of evidence. Accordingly, the case study approach is also regarded as “an all-encompassing method”, which is counted as another notable feature (Yin, 1994: 13). Its diversity, in terms of data collecting methods, in comparison to other research approaches is clearly revealed by Creswell (1998: 65) as showed in table 4-1.

Biography	<i>Primarily interviews and documents</i>
Phenomenology	Long interviews with up to 10 people
Grounded Theory	<i>Interviews with 20-30 individuals to “saturate” categories and detail a theory</i>
Ethnography	<i>Primarily observations and interviews with additional artifacts during extended time in the field (e.g. 6 months to a year)</i>
Case Study	<i>Multiple sources -- documents, archival records, interviews, observations, physical artifacts</i>

**Table 4.1 Comparison of Data Collection
for Five Research Traditions in Qualitative Research**

. (Source adapted from Creswell, 1998: 65).

The Table 4.1 shows that, in comparison to other qualitative approaches which normally use one or two methods of collecting data, the case study approach involves multiple ways of doing so. The richness of multiple sources of data has actually raised one issue worth noting. Although the case study is genuinely regarded as qualitative research, Yin (1994: 83) suggests that it can include both qualitative and quantitative information (numerical data). Taking this study as an example, although most of my data is qualitative, the quantitative data, such as the number of students and the frequency of museum visits of the teacher’s class studied, are also included. The possibility of including quantitative information may also be extended to using the data derived from quantitative research, e.g. the survey data regarding the frequency of school visits to museums.

In fact, the combination of qualitative and quantitative measures is much recognised by researchers (Miles and Huberman, 1994: 4-5; Creswell, 1994: 174-175.). For example, Lee (1991) states that each research perspective can add a meaningful layer without necessarily contradicting the others: a subjective or interpretative understanding, and a positive understanding.⁶⁹ However, this does not mean that qualitative and quantitative research approaches are the same. Indeed, they have different philosophical underpinnings, answer different kinds of research question, demand different research strategies and provide different information. The case study is defined as qualitative research because all aspects of its inquiry appear to be connected to the qualitative paradigm--- for example, its interest in discovering subjective realities, the flexible and exploratory research procedure, the subjective involvement of the researcher and the inclusive analysis of the data (Merriam, 1988: 3).

4.2.3 The Methodological Issues

The ultimate aim of all research is to search for truth, whether it is fixed and objective as quantitative researchers assume, or ever changing and multidimensional, as perceived by qualitative researchers. For this purpose, all research is concerned with producing valid and reliable results. Traditionally, the concepts of validity and reliability are often applied when assessing the quality of quantitative research: validity refers to the extent to which data collected or conclusions drawn are about the truth, while reliability refers to the extent to which the research findings can be replicated if the study is repeated again (Hein, 1998: 74). Accordingly, good quantitative research is expected to demonstrate that its result is representative of an absolute truth, and its accuracy can be confirmed by repeating the same research procedures and methods.

However, the application of traditional notions of validity and reliability to qualitative research can be problematic. Unlike quantitative research which seeks a representative finding by means of replicable methods and procedures, qualitative research intends to search for diverse realities by means of an exploratory inquiry which cannot be predetermined nor be repeated afterwards. The results of qualitative research are, as a consequence, often criticised by quantitative researchers for being subjective and very limited in generalisation. Qualitative researchers, nevertheless, argue that they stand on a totally different research

⁶⁹ Quoted in Miles and Huberman (1994: 5).

paradigm, so the conventional notions of validity and reliability required by quantitative research are neither pertinent nor fair in the evaluation of their results. As Lincon and Guba state (1985: 293-4): “Different research perspectives make different kinds of knowledge claims, and the criteria as to what counts as significant knowledge vary from one to another.”

Accordingly, as far as qualitative research is concerned, the assessment of its validity and reliability is based on very different assumptions. With regards to the issue of validity, it is often replaced by qualitative researchers with two other criteria, namely ‘internal validity’ and ‘external validity’ (Merriam, 1988; Creswell, 1994). Internal validity deals with the question of whether the research finding matches reality. However, unlike quantitative research which tries to confirm a fixed and objective reality, internal validity is assessed by whether the data collected and interpretations are made adequately and faithfully represent the subjective reality under investigation. This notion is also equivalent to the term ‘trustworthiness’ or ‘authenticity’ given by other qualitative researchers (Lincoln & Guba, 1985; Glesne and Peshkin, 1992; Miles and Hubman, 1994; Hein, 1988), indicating that the research data and findings are trustworthy and genuine.

In order to ensure internal validity, several strategies are recommended. The most common approach among them is ‘triangulation’, which means that researchers use multiple sources of data, or multiple methods, to cross-examine the accuracy of the data and interpretation. Another way of increasing internal validity is to check data with the research subjects from whom it is derived as well as to ask them if the researcher’s interpretations or results drawn are correct. Furthermore, clarifying the researcher’s subjectivity by explicitly stating his/her worldview and theoretical orientation at the outset of the research will also help to increase internal validity. This approach attempts to enhance the researcher’s self-awareness as to how his/her personal values may affect the data collection and interpretations and thereby to eliminate these biases as much as possible (Merriam, 1988: 169-170).

External validity refers to how research findings can be generalised to other situations. However, instead of stressing that the research finding can be generalised universally as argued by quantitative research, external validity asks questions about the extent to which research outcomes can be applied or transferred to other settings. As Walker (1980: 34) explains: “It is the reader who has to ask, what is there in this study that I can apply to my

own situation, and what clearly does not apply?”⁷⁰ Such an application, as suggested by Merriam (1988: 177), is similar to the practice in law or medicine, where the practitioners have to decide whether one case can be applied to another. Because of the nature of this practice, external validity is also defined by many researchers using other vocabularies such as ‘transferability’ or ‘comparability’ (Lincoln and Guba, 1985; Miles and Huberman, 1994; Hein, 1998).

When enhancing the transferability of a qualitative research, the most common approach is to clearly describe the characteristics of people, settings, processes, etc. under investigation. This rich description will offer readers a base of information on which they can assess the potential application of the research findings to their own situations. (Merriam, 1988: 177; Miles and Huberman, 1994: 279). Conducting a cross-case or a cross-site analysis is also recommended as another way of improving external validity (Merriam, 1988: 177, Miles and Huberman, 1994: 173). As Miles and Huberman (1994: 173) put it: “Multiple cases not only pin down the specific conditions under which a finding will occur but also help us form the more general categories of how those conditions may be related.” In other words, building a general explanation or a theory of the relevance between one case and another can be counted as a form of generalisation as far as external validity is concerned.

This viewpoint is also shared by Yin (1994: 30-31), who argues that the method of generalisation in multiple case studies is ‘analytic generalisation’, not the ‘statistical generalisation’ used in quantitative research. “Analytic generalisation”, as Yin (1994: 31) explains, means that “a previously developed theory is used as a template with which to compare the empirical results of the case study. If two or more cases are shown to support the same theory, replication may be claimed. The empirical results may be considered yet more potent if two or more cases support the same theory but do not support an equally plausible, rival theory.” To achieve analytic generalisation, Yin (1994:32) further recommends that researchers should make efforts to develop a theoretical framework at the beginning of the study, no matter whether the study is to be descriptive, exploratory or explanatory. The role of a preliminary theoretical framework is to provide a sufficient blueprint for a researcher to decide what data to collect and how to analyse the data, which will enable the generalisation of the results of multiple cases.

⁷⁰ Quoted in Merriam (1988: 177).

The last methodological concern is reliability. In qualitative research, instead of asking whether the study can be replicated, researchers' concerns for reliability rest on "whether the process of the study is consistent, reasonably stable over time and across researchers and methods" (Miles and Huberman, 1994: 278). Lincoln and Guba (1985: 288) also suggest the concepts of 'consistency' and 'dependability' in assessing the reliability of qualitative research. As in qualitative research a researcher is often regarded as the key instrument in collecting and interpreting data, (s)he is thus expected to be as reliable and dependable as possible. Researchers' reliability can be improved if they exercise the following approaches: gain more research experience by doing a pilot study, clarify researchers' values and roles to eliminate personal biases, and detail the rationale behind the design and the selection of the research methods, strategies and procedure. Furthermore, using multiple methods as a form of triangulation can also strengthen the reliability as well as the internal validity of the research (Merriam, 1988: 172). Finally, Yin (1994: 63) suggests that it is essential to have a study protocol in a multiple-case design, which serves as a general guideline for researchers to follow throughout the whole process. By following the protocol, the consistency across multiple cases, in terms of the research focus, field procedures, interview questions and format of the case report, can be improved significantly (p. 63-74).

To summarise, this subsection has discussed the essential nature of the qualitative case study approach, which is very important in understanding the research design made in this thesis. Furthermore, some methodological issues in qualitative research regarding internal validity, external validity and reliability have been discussed, and the approaches for their improvement have also been suggested respectively. All of the issues mentioned above were taken into consideration when this research was designed and conducted. They will be further discussed in the next section.

4.3 Conducting Case Studies

4.3.1 Doing a Pilot Study and Designing a Case Study Protocol

Prior to conducting the actual case studies in this research, the pilot studies were first carried out in England (February and March, 1998) and then in Taiwan (July, 1998). The data collection for the first pilot study in England followed a preliminary case study protocol, consisting of a set of general rules and criteria regarding who, what, when and where was to

be investigated and how the investigation was to take place. Based on this, two case studies of the primary school teachers' experiences of visiting the Natural History Museum in London were conducted. For each case, I visited the participant teacher's school for at least five working days continuously, four days in the school and one day accompanying the museum visit. This experience improved my understanding of English primary schooling and the part the museum visit played in school life.

In addition, to improve my skills of observation and note taking, numerous private observations of school visits were also conducted unobtrusively inside the Natural History Museum, London. Documents and information about the museum's school services and educational policy were also collected at this stage.

As for the pilot study in Taiwan, six teachers from those schools local to the National Museum of Natural Science were interviewed. Although no fieldwork was conducted at this time, each interview with a teacher was in-depth enough for me to depict the whole process of the museum visit in its school context.⁷¹ In addition, two staff from the educational department of the National Museum of Natural Science were also interviewed about their experience of working with school parties. By comparing the interview data of both the teachers and the museum staff, a more concrete picture of school visits in the museum could be drawn. Relevant documents about the museum's educational services were also collected in this pilot study.

This research benefited tremendously from the practice of the pilot studies from both a theoretical and methodological aspect. From a theoretical perspective, the practice of the pilot of studies helped me to re-develop my theoretical assumptions and refine the research focus. In general, the results of the pilot studies were consistent with my hypotheses as well as most of the relevant theories about English and Taiwanese schooling I had read in the literature. However, the results highlighted one aspect of schooling, i.e. the educational structures, that was initially overlooked in my theoretical assumptions. Before the pilot studies, I was mainly concerned with how teachers' perceptions and values would affect their usage of the museum. The findings of the pilot studies suggested that educational structures, especially the changes brought about by the recent educational reforms in both England and

⁷¹ Because this pilot study was carried out during the school summer holiday, it was assumed that the interview data should be sufficient for me to understand teachers' museum experiences at this stage.

Taiwan, also had a great impact on teachers' behaviour. Therefore, this aspect was deliberately included in the scope of this research.

From a methodological perspective, the practice helped me to test a preliminary case study protocol. As Yin (1994: 63) suggests, a protocol is extremely important in a multiple-case study designed for maintaining the consistency of data collection across cases. Initially, it was expected that the English and Taiwanese case studies would follow the same research protocol. However, the practical experience gained from the pilot studies implied that a modification of the protocol to suit the different contexts of these two countries seemed necessary. One of the major modifications was the inclusion of other informants' opinions in the Taiwanese case studies. Unlike the English teachers studied who had great autonomy in organising their visits, according to the interview data, the Taiwanese teachers relied heavily on schools, and sometimes on specialist teachers, to organise the trips. In this regard, the opinions of informants who had a direct influence on the visits would be included in the Taiwanese cases.⁷² Apart from this, some methodological issues such as gaining access to schools, interview questions and audio tape recording were also tackled in slightly different ways in these two countries. Despite these necessary modifications, the procedures and methods of data collection in both countries remained as consistent as possible.

4.3.2 Selecting Cases

According to the research design, two museums, one in England and the other in Taiwan, would be selected, for each of which three case studies of local teachers' museum experiences would be conducted. The purpose of this multiple-case design, as discussed earlier, is to increase the external validity of the research findings. As Miles and Huberman (1994: 29) state: "If a finding holds in one setting and, given its profile, also holds in a comparable setting but does not in a contrasting case, the finding is more robust." Based on this rationale, the choice of samples in a multiple-case design should follow the replication, rather than the sampling, strategy. It enables a researcher to generalise his/her findings from one case to another on the basis of a match to the underlying concept, not to a larger universe (Miles and Huberman, 1994: 29; Yin, 1994: 45-46). Furthermore, to match an underlying assumption, there should be criteria and strategies of sampling which will enable research

⁷² Informants such as administration officers who organised school outings and Natural Science teachers who were actively involved in the visits.

outcomes to be generalised across cases. (Miles and Huberman, 1994: 29). Based on this principle, the specific criteria and strategies for selecting the cases in this research are addressed as follows.

4.3.2.1 The Criteria for Selecting Museums

The two museums selected were the Natural History Museum in London, England, and the National Museum of Natural Science in Taichung, Taiwan. Ideally, it was expected that the museums selected would be as similar as possible in order to highlight the impacts of different styles of schooling on the teacher's museums experience. However, this was practically impossible--- I could only seek museums sharing the maximum number of similarities. In spite of their individual differences,⁷³ the Natural History Museum in England and the National Museum of Natural Science in Taiwan did share several major characteristics, as follows:

1. Both museums focus on the same type of natural science collection.
2. Both museums are national museums, and the biggest museums of natural science collections in their own countries.
3. Both museums have similar educational agendas.
4. Both museums have school children as their main audience.

4.3.2.2 The Criteria for Selecting Teachers

Three English teachers and three Taiwanese teachers were selected according to the following criteria:

1. They were all from primary schools local to either the Natural History Museum in London or the National Museum of Natural Science in Taichung.
2. They were all teaching pupils aged from 7 to 11 years old in state schools. This criterion addressed the issue of the different educational systems in England and Taiwan. Firstly, compared to England, there are very few private primary schools in Taiwan. Hence, I only chose teachers from state primary schools in both countries. Secondly, the children in the English primary schools are aged from 5 to 11 years old,

⁷³ The detailed information of these two museums has been discussed in Chapter 3.

but in Taiwan their age range is from 7 to 12 years old. The overlapping age range, 7 to 11-years- old, was chosen in order to compare teachers whose students are of similar ages.

3. They all conducted a museum visit during the time of my study so that I could observe how the visits naturally occurred in both the school and the museum settings. Also the time interval between each museum visit was sufficiently long enough to allow me to fully participate in and observe the whole process of the visit, including preparation and follow-up work.

In addition to the above criteria, it is worth noting that three English and three Taiwanese teachers were deliberately chosen from diverse types of primary schools. In the English cases, one teacher was from a school located in the City of London, in which the majority of students were white-Europeans; the second teacher was from a Catholic school located in a multi-racial community; the third teacher was from a school located in a Pakistani community. In Taiwan, the three teachers chosen were from schools of different sizes. One school had sixty-seven classes with more than 2800 students; the other two schools had forty-two classes and fourteen classes respectively.

The purpose of including schools of different types or sizes is twofold. Firstly, it enriches the perspective of this research by presenting the cases in different contexts. Secondly, such a design further confirmed my theoretical assumption by demonstrating that the teachers, under the influence of the same schooling culture, would share similar characteristics in their museum experiences, despite the differences between schools. The external validity of this research can be sustained by giving evidence supporting my theoretical assumption.

4.3.2.3 Gaining Access and Building the Relationship

The English case studies were conducted from September to December 1998, followed by the Taiwanese ones from April to June 1999. The first stage of the case studies was to select teachers from the booking records of the museums. In the Natural History Museum, teachers' visit bookings were computerised, while in the National Museum of Natural Science, school bookings were made by telephone call and recorded by one member of staff. Using these booking records, I was able to find out which teachers were planning a visit to the museums in the following months, thereby allowing me to select and contact the potential

participants.

Due to the difference in schooling cultures between England and Taiwan, the strategies for gaining access to schools were varied. In the English cases, the first contact was made by sending an introductory letter to the teachers selected, as well as their head teachers, to request their permission to carry out my study. After being granted initial permission, I then conducted face to face interviews with the teachers. In the interviews, some essential questions were asked regarding their opinions of museum visits and of teaching and learning in general. Its purpose was to select teachers whose opinions generally matched the theoretical assumptions I had developed. Furthermore, my research purpose and the plan of data collection were clearly explained to the teachers. In addition, in order to protect the anonymity of the participants, the teachers were informed that their identities would be disguised by assigning aliases to them. These two actions not only address some of the ethical issues in the qualitative research as suggested by researchers (Glesne & Peshkin, 1992; Creswell, 1998: 132), they also intend to establish a trustworthy relationship with the participants before the fieldwork.

As for the Taiwanese cases, it was known beforehand that gaining access to schools would be very difficult because it is not common for a stranger to undertake research in teachers' classrooms in Taiwan. Hence, I was unable to use the strategy applied in England, but had to rely on other people's help. After examining the booking record from the museum, one school principal I knew kindly introduced me to other school principals whose teachers were on the booking list and who met my criteria. Although several school principals gave me their initial approval, it was still difficult to find teachers who were genuinely willing to take part in this study rather than just being told to do so by the principals. After conducting the interviews with teachers, I found that very few of them were willing to be observed while they were teaching.⁷⁴ After numerous interviews, rejections and frustrations, I finally found three teachers who showed interest and agreed to participate in this study. Their full cooperation significantly contributed to the consistency of the research methods used for the Taiwanese and English cases studies.

⁷⁴ Most teachers agreed to have interviews but were reluctant to be observed while they were teaching.

4.3.3 Collecting Data

4.3.3.1 The Format of a Case Study

The aim of the case study is to describe in detail how the teacher conducted a museum visit in the school context, and also to explain why (s)he conducted the visit in that way. Accordingly, the format of a case study consisted of the three types of information needed:

Type 1: The features of the participant teacher and the school.

Type 2: The teacher's opinion of educational visits, including museum visits, in school life.

Type 3: The visit to the Natural History Museum (London)/the National Museum of Natural Science (Taichung)---

- a. The background to the visit
- b. The teacher's objectives of the visit
- c. The preparation before the visit
- d. The visit to the museum
- e. The follow-up work and teacher's comments about the visit

The data collected from Type 1 and Type 2 helped to establish the broader schooling context in which the teacher's museum agenda is developed. Type 3 data contributed to the description and explanation of the teacher's experience at every stage of conducting a museum visit. Furthermore, the data of Type 1 and Type 2 were also referred to the data of Type 3 to examine their associations, for example, how the teacher's opinions of educational visits has affected his/her museum experience.

4.3.3.2 The Field Procedures

As each of the six cases required the same type of data, the field procedures across the six cases were generally similar. For each case, I stayed with the teacher's class for at least one week to observe the preparation before the visit, the trip to the museum and the follow-up work afterwards. I also decided to stay with the teacher's class from the first lesson to the end of school day, rather than visiting the class once or twice a week or only staying in the classroom for a few hours per visit. Such a strategy enabled me to be more deeply immersed in school life. It also helped me to be recognised as a 'friend' rather than a 'guest' in the

classroom so that the behaviour observed would be more natural.

The data collection was mainly conducted in two locations: in the school, particularly in the teacher's classroom, and in the museum being visited. In the school, I collected data by using multiple methods including interviews, observation and the collection of documents, artefacts and some visual aids. I also followed the school trip to the museum, observing and recording the entire visit. After the fieldwork was mostly done, I made subsequent visits to the school or contacted the teacher by phone to gather supplementary information or to check my interpretation of the data. This follow-up process lasted until the data analysis of the case was mostly completed.

4.3.3.3 The Role of the Researcher

A researcher's role in the field has a great impact on the quality of the data collected and its interpretation (Merriam, 1988, 92-96). Therefore, it is necessary to firstly clarify my role in each case study. In fact, my role as an 'insider' or an 'outsider' to the case under study is hard to define. On one hand, I wished to be treated as an insider in order to get first hand information, yet on the other hand, I also needed to be detached from the case in order to remain neutral to the phenomenon observed. The best balance of these two opposite roles, as far as I could achieve, was to assume a role of participant observer by immersing myself in school life, mostly in the teacher's class, for at least a week, while in the meantime, trying to avoid influencing the teacher or the situations.

To achieve this balanced role, I always stayed at the back of the classroom and remained as unobtrusive as possible. I also asked permission when I needed to tape record or take photos. Most importantly, the strategy of staying with the class from the first lesson to the end of the school day really helped the teacher and the students to quickly get used to my presence in the class.

Furthermore, I was very cautious about any potential influence of my words upon the teacher, to avoid giving any suggestions or evaluative comments. For example, during the data collection, some Taiwanese teachers were very curious about how British teachers conducted museum visits because they felt less experienced in this aspect. To avoid influencing their subsequent actions or opinions as a result of sharing my experience, I did not tell them of my

findings in the British cases until the very end of the data collection. My reasons for doing so were carefully explained to the teachers to avoid offending them.

Although the data regarding other teachers' museum experiences was kept confidential during the inquiry process, some insights into schooling in the other country were discussed with the teachers when they were interviewed for their opinions of teaching and learning. Sharing this information was intended to give the teachers "evocative stimuli", a strategy suggested by anthropologists Spindler and Spindler (1987: 8), so that they could reflect on their own behaviour which otherwise was taken for granted or could not be articulated. However, I also handled this with caution to avoid imparting any evaluative comments or impressions regarding which type of schooling was better.

4.3.3.4 Methods Used

The triangulation approach was used to increase the internal validity of this research as multiple methods were employed for collecting different types of information. The practice is presented in the form of a matrix (see Table 4-2, p. 121).

Interview

Given that the emphasis of this research is to understand the teacher's experience, it is significant to have the interview data containing the teacher's own words or personal insights in explaining his/her actions. In-depth interviews were conducted with the participant teacher several times throughout the case study. They were carried out before, during and after my one-week stay in each school. There was no fixed schedule as to when to conduct the interviews or how long they would last, and they were mainly carried out at the teacher's convenience. On average, the interviews lasted between 30 minutes and an hour. They usually took place at the end of the school day or during the lunch time in the teacher's classroom or common room, or sometimes in quieter areas such as the library of the school. All interviews were tape-recorded and transcribed later.

Each interview normally consisted of two sets of questions. One followed a semi-structured interview protocol, and the other was unstructured in order to raise the issues that emerged from the inquiry process. The tapes of the interviews were listened to and were briefly

transcribed to identify any important or unclear statements on the same day of the interview.

	Interviews	Observations	Documents ¹	Artifacts & Visual Aids ²
The features of the school and the participant teacher.	√	√		
The teacher's view of educational visits in school life	√	√	√	√
The background of the museum visit	√			
The teacher's objectives of the visit	√		√	
The preparation before the visit	√	√		√
The visit in the museum	√	√		√
The follow-up work and teacher's comments about the visit	√	√		√

1. Documents include school brochures and teacher's lesson plan

2. Artifacts and Visual Aids include class work, worksheets, photographs, etc.

Table 4.2 Data Collection Matrix: Types of Information by Source

The field notes were also reviewed daily during my stay in the field. This procedure helped me to preliminarily analyse the data, and by doing so, to raise questions for the next interviews and to redirect the focus of my observation. This exploratory process in which data collection and analysis happen simultaneously indeed reflected the nature of qualitative research as suggested by Merriam (1988: 123).

The questions emerging from the inquiry process were asked in the interviews as mentioned earlier. The most frequently asked questions were about particular behaviour that had been observed or the unclear meanings of some teacher's statements. Clarifying these questions improves the accuracy of my interpretation of the phenomenon, thereby improving internal validity of the research findings.

The interviews also covered those questions in the questionnaire protocol (Appendix A). The design of the protocol was based on the desired information predetermined for a case study. Therefore, this part of the data was actually the core of the interviews. In each interview, one or two sections of questions, focusing on one or two areas of interests, were selected from the protocol. Although I did not follow the sequence in the protocol but went with the flow of the interview, all questions were fully covered by the end of the case study.

Although this protocol chiefly guided the interviews, it needs to be pointed out that the questions in the protocol were deliberately designed to be broad, rather than be specific, to allow the teachers to freely express their opinions. While looking for individual interpretations, each question still aimed to collect key areas of information in order to ensure the comparability of data across the cases. Furthermore, the interview was expected to be an intensive discussion about the topics of interests, so I needed to respond well to the teacher's statements, reading between the lines and encouraging the teacher to share more opinions with me.

Due to the apparently different schooling contexts in England and Taiwan, some modifications of the questions in the questionnaire protocol were unavoidable. For example, one question asked to the English teachers was: 'During the above process (of carrying out the visit), what are the most influential factors or difficulties you have encountered which may influence your plans in conducting this visit?' However, because the Taiwanese teachers interviewed had the museum visits arranged by the schools, the question asked in the Taiwanese cases became: 'I know the school arranges the visit for you this time. Assuming that you are trying to conduct a visit by yourself, what are the most important factors you have to consider or the biggest difficulty you may encounter?' Although these two questions were asked in slightly different ways, they were intended to elicit the same areas of information. The full questionnaire protocol is given in Appendix A, in which the questions asked in English and in Taiwanese cases were identified.

Interviews in the six case studies were mainly conducted with the participant teachers in the manner described above. However, in the Taiwanese case studies, other informants were interviewed to supplement the participant teachers' opinions. This was due to a further contextual difference between England and Taiwan. In England, the participant teachers conducted the visits by themselves. Therefore, they could provide sufficient information in this regard. In contrast, the Taiwanese teachers had the museum visits arranged by their schools. Consequently, it was necessary to interview the staff who arranged school outings to gain a thorough understanding regarding the procedure of organising the visits. The interviews with them were less structured, and the questions focused on the reasons for and the process of arranging the visit. Questions about the role of visits in school life were also asked. The data was later compared to the participant teachers' opinions to add another dimension and insights into the case.

In addition, in the third Taiwanese case study, the Natural Science teacher was also interviewed. Unlike the Natural Science teachers in the other two schools, teacher Tsai⁷⁵ in the third case was actively involved in and had a direct impact on the visit. Therefore, he was regarded as the second participant teacher, and was interviewed using the same questions in the protocol. His opinions served as a valuable data in comparison with the main participant teacher's opinions.

The research procedure discussed above demonstrates that I, as the key instrument of data collection, had to pertinently respond to the real contexts encountered by appropriately adjusting my inquiry strategy and by selecting relevant people for interviews. Yin (1994: 57) has highlighted the balance between flexibility and rigour in the case study approach, especially in a multiple-case design. This is reflected in this research: although I followed a research plan and an interview protocol to collect data across cases, I also made minor changes to suit the unique characteristics of the individual cases.

Participant Observations and the collection of documents, artefacts and visual aids

The importance of participant observation in research has been emphasised by Guba and Lincoln (1981: 213): "In situations where motive, attitudes, beliefs and values direct much, if

⁷⁵ Teacher Tsai is not a relative of the author of this thesis.

not most of human activity, the most sophisticated instrumentation we possess is still the careful observer--- the human being who can watch, see, listen...question, probe, and finally analyse and organise his direct experience.” My chief purpose in observing was to gain direct experience regarding how the museum visit actually occurred in its natural setting. Furthermore, as Guba and Lincoln point out, observations not only need to involve the skill of looking, but also involve listening, questioning and probing. This was indeed the case in this research, in which my observational task involved more than just recording what I had seen or heard, but also including investigating why things happened in particular ways. Accordingly, informal conversations with the teachers or the students about the reasons behind a phenomenon took place frequently.

Prior to my stay in the field, informal observations regarding the features of the school and its local area had already been made during my initial visits. The formal observations started on my first day in the participant teacher’s class. During this period, I participated in almost every lesson and activity with the students, including school assembly and occasionally after-school activities. My continuous week-long stay with the class allowed me to observe practice in the classroom and to become acquainted with English and Taiwanese schooling in action. Although I intended to immerse myself in school life and to note down what I saw as much as possible, it was neither possible nor appropriate for me to observe or record everything. Therefore, the observations done in the school were focused on the following three areas in particular, namely the features of schooling, the participant teacher’s teaching practice and the work specifically done for the museum visit.

The observational data regarding the features of schooling helped me to establish a vivid and concrete picture of the schooling context within which the museum visit took place. Although the characteristics of schooling seemed to be too vague to be directly observed at first, the theories of schooling in the literature provided me with general guidance towards the essential aspects which needed to be looked at. Furthermore, I also benefited from the approach suggested by Erickson (1973)--- “making the strange familiar and the familiar strange”⁷⁶, which helped me to effectively distinguish the respective characteristics of English and Taiwanese education. Such an approach was exercised by firstly conducting the English case studies, then the Taiwanese ones. As I had little experience of English primary

⁷⁶ This is originally T. S. Elliot’s words, but is commonly quoted by other researchers later. See also footnote 5

education, what I encountered in the English schools was a novel and fresh experience for me. Therefore, I was able to quickly discern the features of English primary schooling which may be taken for granted by others, including the small size of the school and of the class, the layout of the classroom and the school building, etc.

After conducting the English case studies, my English experience provided me with a fresh perspective with which to re-examine the Taiwanese schooling which I was so used to. In comparison, the more uniform features and formal atmosphere observed in the Taiwanese schools became apparent to me. The differences between English and Taiwanese schooling were not only recorded in my notes, but also by taking photos in order to add visual evidence to my observational data. In addition, the relevant documents, such as school brochures for parents which indicated the school's policy or educational objectives, were also collected for the same purpose.

Observations of the teacher's teaching practice in the classroom helped me to identify his/her apparent teaching patterns (see Appendix B-1, B-2). They were later compared to the interview data discussing the teacher's educational ideas and objectives. These were assumed to closely connect with the ways the teacher perceived and conducted the museum visit. To supplement the observational data, the documents which may also reveal his/her educational intentions, e.g. the paper work relating to lesson plans or assessments, were also collected (see Appendix C). In addition, it was assumed that the teacher's attitude towards using teaching materials in the classroom mirrored that of using museums. Therefore, special attention was also paid to this area of practice. The materials and equipment used by the teacher were noted down in detail with some photos taken as visual evidence.

The third part of the observations focused on the lessons or activities directly related to the museum visit under study. This was mainly concerned with the association between the visit and the curriculum or lessons taught in the classroom. In the English cases, I used audio tapes to record these lessons while I was taking observational notes. Although the tapes were not transcribed verbatim, they were listened to and then compared with my field notes. This practice helped me to vividly recall the activities observed and to expand on the data in the notes. Furthermore, any worksheets prepared by the teachers for the visits were also collected and analysed for their underlying learning objectives.

Compared to the large amount of class work done for the museum visits in English cases, very little effort had been made by the participant teachers in Taiwan, because the visits had no direct relevance to their teaching in schools. In order to extend this part of the data, I also attended Natural Science lessons. Although the Natural Science teachers, except teacher Tsai, did not join the visits, I felt it was worth examining whether they had done any preparatory work in their class for the visits.

In addition to the observations carried out in the schools, I also followed the school trip to the museum and observed the entire process of the visit in each case study. The observation began on the morning of the visit when the teacher and students were still preparing for the trip in the school. Special phenomena, such as the atmosphere in the class, the issues that the students were reminded of, the adult helpers accompanying the visit, were all noted down. I then followed the class to the museum and recorded its visiting route and the time spent in each gallery. My impressions of any salient episodes that occurred spontaneously were also recorded. Furthermore, the teacher's teaching-related behaviour, his/her interaction with the students, and responses to the educational services or exhibits in the museum were also noticed on A4 paper (see Appendix D). Each piece of paper consisted of four columns for recording four different types of details, namely time, location (exhibits), people (teacher/students), and actions (including verbal words). Such a format was very useful in recording the events and the context in which they were taking place.

Because each visit was a one-off event, it meant that I was unable to observe it again if my data was not efficiently collected. Therefore, special devices were designed to improve the efficiency of data recording. Firstly, special codes for some terms and symbols for actions were developed beforehand to increase the speed of note taking. For example, 'T' for teacher, 'S' for students, 'IS' for individual student, 'GS' for groups of students, 'WS' for the whole class; the symbol \rightarrow or \leftarrow refers to the direction of an interaction. To interpret them, $T \rightarrow IS$, for example, means that the teacher approached an individual student (to give help or instructions), while $T \leftarrow IS$ means that an individual student approached the teacher (see Appendix D).

Secondly, in order to record the teacher's words during the visit while remaining unobtrusive, I prepared a pocket audiotape recording machine which was carried by the teacher, with a

small micro-phone attached to the teacher's collar, to record his/her words. The tape was later listened to and compared with the field notes. It revitalised my memory of the visit when I later wrote up a description of it. Important words and conversations deciphered in the tape were also selected for transcription to enrich the descriptive accounts of the visit as well as to strengthen the observational data.

It has to be pointed out that the strategy of tape-recording described above could only be adequately applied to the English cases, not to the Taiwanese ones. This was because the classes in all three Taiwanese cases were attending the museum's educational programmes most of the time during the visits, meaning that the teachers had little opportunity to speak with their students.⁷⁷ Therefore, it was decided not to use the tape-recording method in the Taiwanese cases in order to avoid unnecessary inconvenience to the teachers. Instead, I took notes if the teachers did say something important.

The final device to reinforce the observational data was writing down reflective notes (see Appendix E) immediately after the visit. The content of these notes included a flow chart of the visit itinerary and the time spent, my overall impression of the visit, and my summary of the teacher's teaching patterns which impressed me most. Writing these notes really gave me a chance to reflect on what I had observed while my memory was still fresh, which otherwise could not be done because I was too busy in taking notes during the visit.

4.4 Data Analysis

4.4.1 Analytical Strategies

There were two levels of data analysis in this research, namely case-oriented analysis and variable-oriented analysis. At the first level, the approach of case-oriented analysis was employed. I examined each case as a whole entity, looking for its configuration and patterns, as well as causes and effects within it. After analysing each case study, I looked for the configuration of the collective British case and that of the Taiwanese one, and then compared them for differences and similarities. At this stage, the approach of variable-oriented analysis was adapted, meaning that I used a theoretical framework to further explain the patterns emerging from the case studies.

⁷⁷ I could predict this because I was informed about their visiting agenda in advance.

Miles and Huberman (1994: 174) have explicitly distinguished between the characteristics of case-oriented and variable-oriented analyses, along with their respective advantages and drawbacks:

“...a case-oriented approach considers the case as a whole entity, looking at configurations, associations, causes, and effects within the case.... The variable-oriented approach is conceptual and theory-centred from the start, casting a wide net (cf. Runkel, 1990) over a (usually large) number of cases.... each approach had pluses and minuses. Variable-oriented analysis is good for finding probabilistic relationships among variables in a large population, but it is poor at handling the real complexities of causation or dealing with multiple subsamples; its findings are often very general, even “vacuous”. Case-oriented analysis is good at finding specific, concrete, historically-grounded patterns common to small sets of cases, but its findings often remain particularistic, “while pretending to great generality.”

As these two approaches have their pros and cons, it is possible, and usually desirable, to combine them as an integrated strategy for maximum benefit (Miles & Huberman, 1994: 176). It was also the aim of this research to apply a mixed approach, such as this, which not only preserved the uniqueness of the individual cases, but also provided the general explanations across the board.

4.4.2 The Case-oriented Analysis

I firstly adopted the case-oriented analysis by examining each case separately. Each case was written in a narrative form which provided both descriptive and interpretative accounts of how and why the teacher conducted a museum visit in his/her school context. The content followed the format of a case study predetermined (see 4.3.3.1, p.118), which provided a consistent framework of organising and displaying the data across the cases.

The first step of my data analysis was to sort the data from multiple sources into the specific topics according to the format of a case study, and then analyse the data within the individual topics respectively. Based on this procedure, three data topics were analysed, namely the features of the participant teacher and the school, the teacher’s views of educational visits in school life and the whole process of the teacher’s experience of conducting the museum visit. Comparatively, the analysis of the first topic, regarding the features of the teacher and the

school, was straightforward and mostly contained descriptive accounts. Therefore, my next discussion here will be mainly focused on the more elaborate analyses required by the later two topics.

The data analysis regarding the topic of the teacher's views of educational visits in school life aimed to provide a substantial contextual background for the museum visit being undertaken. It tried to understand how the teacher perceived and valued educational visits, including museum visits, as well as how his/her perception and values were related to school life. Given that the emphasis of this research was to understand the teacher's experience from his/her personal perspective, this part of the analysis tried to use the teacher's own words as much as possible. Therefore, the primary task here was to examine the interview data with the teacher.

The interview data was reviewed and then sorted into different themes, such as the 'teacher's ideas of teaching and learning', 'school policy or ethos of outings', 'the relevance between outings and the classroom teaching', etc. The themes mainly reflected the key issues which were covered in the questionnaire protocol. Afterwards, the data under each theme was then examined for patterns or key phrases which were counted as meaning units representing the teacher's main ideas or causal factors. For example, under the theme 'the teacher's ideas of teaching and learning', several meaning units were identified in the interview data with one English teacher, including 'feeling safe', 'motivation', 'practical experience', 'confidence', 'work independently and cooperatively', etc. (see Appendix F).

The units identified in the interview data were then compared to the data from other sources. This method of triangulation helped verify whether what the teacher had said was what actually happened in reality. Taking the above example again, the meaning units 'motivation' and 'practical experience' identified in the interview data were compared with the teacher's teaching patterns which emerged from the observational data, as well as from other artefacts, such as the students' class work, or visual aids, such as the photos showing the colourful displays in the classroom, which reflected the teacher's educational ideas.

Sometimes the interview data was not congruent with the data from other sources. In such cases, further investigation had to be undertaken. For example, one teacher in the Taiwanese case claimed that the school's policy was in favour of educational visits. However, the

observational data indicated that outings were not conducted as frequently as they seemed to be, nor did they have any direct association with the classroom teaching. When asked about this contradiction, the teacher's explanation surprisingly generated a new insight into the phenomenon.

Once the data from different sources had been cross-examined, clarified and verified, I then undertook the explanation-building process by comparing these themes, trying to figure out their associations. For example, how did the school's ethos relate to the teacher's educational ideas on teaching and learning? How did the teacher's educational ideas relate to his/her perception of and value placed on outings? How did the teacher's attitudes towards outings relate to the ways (s)he connected the experience of outings to the classroom teaching? By examining the causalities of these patterns, coherent explanations regarding the teacher's views of educational visits in school life were gradually constructed.

While building up my interpretations of the case, my guiding principle was to employ tangible evidence, whether this was the teacher's own statement, or data derived from observations, documents or artefacts, to support my explanations. This was based on Miles and Huberman's (1994: 144) suggestion: "good explanations must take into account both personal meanings and public actions. Furthermore, good explanations will need to link the explanations given by the people we are studying with explanations we developed as researchers."

With regard to the data analysis of the teacher's experience of conducting the museum visit, my first concern was to thoroughly describe the whole process of the visit in a sequential order, which started with the descriptions of why the teacher decided to have this visit, what his/her objectives were for this visit, what preparation (s)he had done, what happened and how (s)he behaved during the visit, and finally what (s)he did and commented on after the visit. This part of the analysis was mainly descriptive, derived from the data of my direct observations and the teacher's own statements. In addition to the description of the chain of the events, my next task was to add the explanatory analysis showing how one event led to another, or how ideas influenced the subsequent actions, e.g. how did the preparation done in the classroom relate to the teacher's visiting objectives? How did these objectives affect the teacher's visiting agenda and behaviours during the visit? By integrating both descriptive and explanatory accounts, my analysis displayed a series of closely associated sequential

events which accounted for the whole process of the teacher's museum experience.

After the three main topics had been analysed respectively, the final procedure of the case study was to figure out the associations between the analyses of the three main topics on the format of the case study. For example, how did the features of the participant teacher and the school relate to the teacher's views of educational visits in school life? How did the teacher's ideas and values regarding a museum visit relate to the teacher's experience of conducting the museum visit? In other words, I tried to connect these three topics as a whole to build a comprehensive picture regarding this museum experience within the school context, and to provide consistent and plausible explanations for this experience and its context.

4.4.3 The Variable-oriented Analysis

Once each case study report was completed, the next stage was to identify the convergent patterns within the collective of the three British cases, as well as the Taiwanese ones. These two sets of patterns found in the two countries were then compared with each other to discover their differences and similarities. During this process of comparison, I was undertaking the variable-oriented analysis, developing a theoretical framework to explain why the teachers in the same country used the museum in similar ways, while the teachers in the other country had contrasting outcomes. The rationale of this process reflected the replication strategy suggested by Yin (1994: 31). It means that a previously developed theory is used to compare the empirical results of the case study; if the results of two or more cases support the same theory, the replication may be claimed. Yin further suggests (1994:31) that if the results of several case studies support the same theory but do not support a rival theory, these results are considered to be more potent. This is also the rationale of comparing the English and Taiwanese cases in order to demonstrate the impact of different schooling on teachers.

It is important to point out that my theoretical development was a constantly refined process which started as early as the outset of this thesis. This process is clearly illustrated in the Figure 4-1(see p.133). At the beginning of this research, an initial theoretical assumption presuming that different types of schooling have different impacts on teachers' museum experience was formed. Accordingly, the broad literature review of schooling was conducted. Having said that, during the process of analysing case studies, I constantly

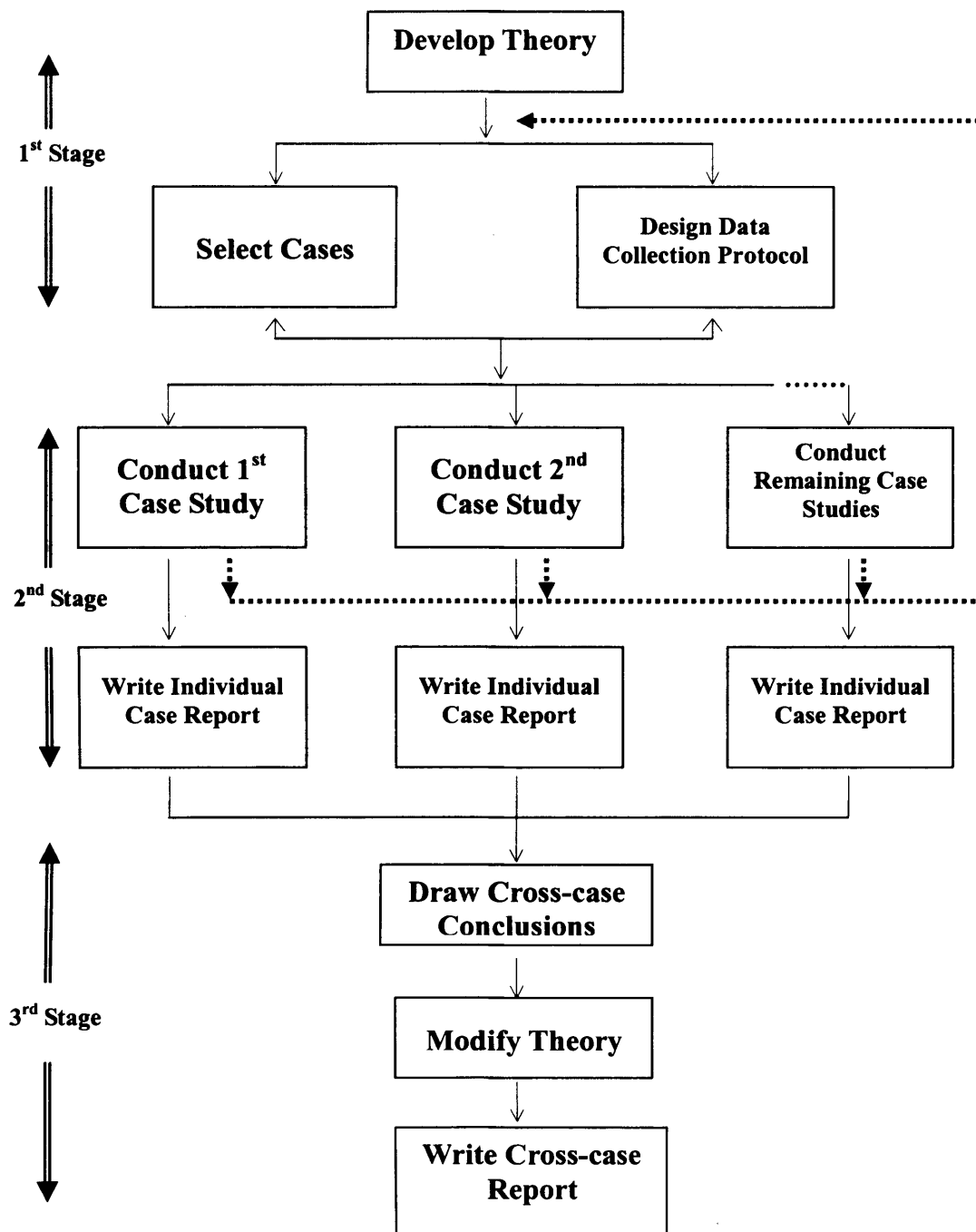
referred to the literature of schooling to find the appropriate explanations for the data found. It was also found that, in addition to the factor of schooling, some aspects, e.g. different museum cultures of England and Taiwan, have also affected the teachers' museum experiences. Therefore, extra theories were taken into account to build a more thorough theoretical framework which was able to provide the most robust explanations of the cases. The process of re-finishing the theoretical framework continued throughout this research and was not completed until the cross-case comparison was made and the differences between the cases were identified. The final stage of my data analysis was to use this framework to explain the findings of cross-case comparison. This will be discussed further in Chapter 7.

Conclusion

This chapter discusses the qualitative, case study approach employed in this thesis from several angles: its strengths in tackling my research questions and objectives, its methodological concerns, and the way that data collection and analysis are designed. The use of this approach creates a holistic picture of the teacher's experience of conducting a museum visit within a school context. It also allows the teacher to freely express his/her feelings and thoughts about this museum experience.

Six case studies will be conducted in this thesis. Multiple methods of data collection are applied in order to provide comprehensive descriptions of the schooling context in which the teacher's museum experience is formed. The various sources of data also help to probe the teacher's personal insights in depth, they also validate the interpretations made by the researcher. Each case study follows a similar procedure and format for data collection. This strategy ensures consistency and comparability across multiple cases. Two levels of data analysis are employed, namely case-oriented and variable-oriented analysis. The former retains the unique profile of the individual cases, the latter establishes the theoretical framework which is able to explain patterns across the case studies.

Following the discussion of research methods and design used in this thesis, Chapter 5 and 6 will present the results of the case studies conducted in England and Taiwan.



The 1st Stage is 'Define & Design'
 The 2nd Stage is 'Prepare, Collect, & Analyse'
 The 3rd Stage is 'Analyse & Conclusion'

Figure 4.1 The theoretical development of the process of conducting a multiple –case study

(Source adapted from Yin, 1994: 49)

CHAPTER 5

CASE STUDY--- ENGLAND

Introduction

This chapter presents three case studies of English primary school teachers' agendas and experiences of conducting school visits to the Natural History Museum, London. Several key questions will be answered in each case study: What is the teacher's agenda for the museum visit? How is this agenda developed in the school context? How does it relate to school life and classroom practice? How does it affect the teacher's museum experience, including relevant work conducted in school and the actual visit to the museum?

For the purpose of cross-comparison, the content of these three case studies follows the same format. Furthermore, in order to achieve analytical generalization (see section 4.2.3, p.111), the three teachers participating in this study were selected from schools located in different socio-economic areas in London, which have a distinctive school ethos. This strategy aims to demonstrate the hypothesis of this thesis, which is that the same schooling, in this case English primary schooling, will have similar effects on the teachers' agendas and museum experiences regardless of what types of school they work for.

5.1 Case Study 1

5.1.1 Features of the School and the Teacher

This is an inner city school located in the hectic centre of London, beside a famous cultural institution. According to the school statistics, the majority of its students are white Europeans and less than five percent of students are from ethnic minority groups. Like many city schools its size is small, there are 7 classes in total. Its campus is also modest without imposing buildings or a playground. However, the school is sufficiently

self-contained and the building has plenty of space to move around freely. It was purpose-built in 1968 as a result of the national enthusiasm for progressive education, an educational philosophy which believes that children should take an active role in their learning and in developing their full potential rather than being passively taught by teachers with a rigid curriculum.

Rita, my participant teacher, is an advocate of this approach to education. She has been teaching in this school for eight years, after graduating from university. Her class consists of 27 students from Year 5 and Year 6, aged between 9 and 11 years old, due to a policy of mixed age grouping. This arrangement reflects the school's belief that: "No child should be educationally classified simply on the basis of age and the organisation of the school must reflect a degree of flexibility. This flexibility will enable each child to realise his/her own potential as fully as possible."⁷⁸ Rita works very closely with another teacher, Catherine, who also teaches students of the same age group. They are used to planning lessons and preparing teaching material together.

5.1.2 The Teacher's View of Educational Visits in School Life

Although it was established on the basis of beliefs about progressive teaching that were once widely acknowledged in Britain, this school still has to adjust itself to rapid changes in education and meet the recent demands of the educational authorities. Although its teaching approach has been changed and it has become less progressive, the open nature of the school still demonstrates itself in many ways (Plate 5.1, 5.2, p.147). For instance the school building still retains the original open-plan layout: a long corridor containing a library and a shared working area is surrounded by the classrooms which are doorless to the corridor and the adjoining room (Figure 5.1, p. 136). This layout allows free movement and a more informal learning atmosphere. In addition, there is no school uniform and the children call the head-teacher and the teachers by their first names instead of 'miss' or 'sir'. They are also allowed to choose their own seats in many lessons.

⁷⁸ Quoted in the school brochure.

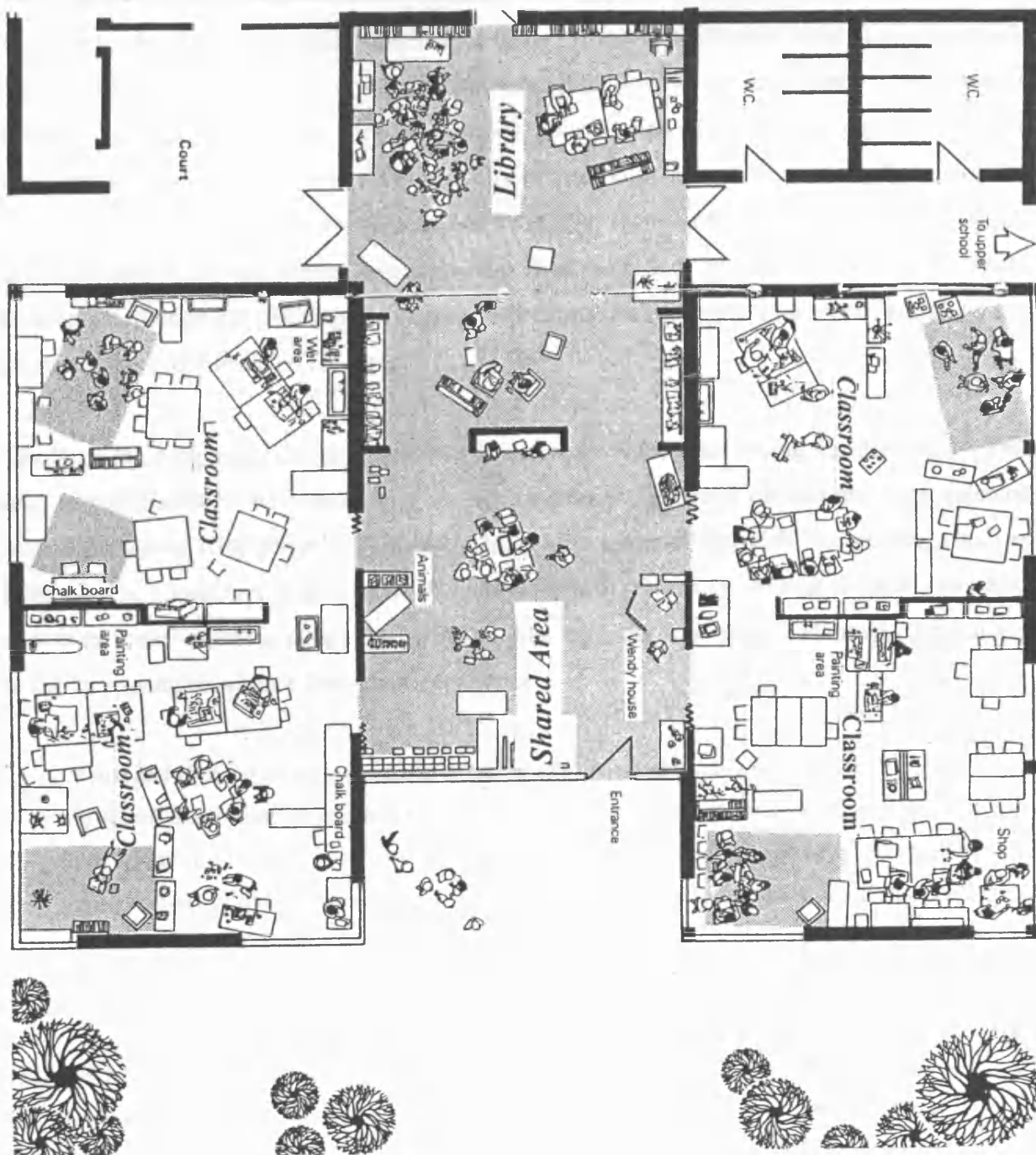


Figure 5.1 The open layout in one area of the school. (Source: Pluckrose, 1975: 47)

Apart from the above tacit traits which are different from the traditional style of many schools, the school strives to keep the topic-based teaching, despite the inevitable trend towards subject teaching that has now happened in most primary schools. In conjunction with topic teaching, educational trips are enthusiastically organised to extend the children's experience of the outside world. They are regarded as a "regular feature of school life" and "play a full and vital part of school life and work" as stated in the school brochure. In this case study Rita and Catherine have arranged a number of outings for the topic 'Flora and Fauna', taking place almost every week of the term.

For Rita, learning from direct experience is the main reason for taking children out. This idea is manifested by her decorations in the classroom where real objects are often selected and displayed by Rita (Plate 5.3, p.148); also, a wide range of materials for learning, such as books, tools, games, are displayed on the concerns of the classroom so that children have easy access to these resources (Plate 5.4, p.148). She explains how important an educational trip is for increasing children's first-hand experience:

"I just feel that the direct experience of going to see something in the museum or going to the woodland to look at creatures and natural habitats or whatever it may be, you can't actually substitute those experiences with the books or me standing in front of the children giving lessons or telling them about it. For them to experience it, it's going to be more real. I think it's going to be invaluable to the children. The other teachers in the school also feel the same way. We go on as many outings as possible relating to our topics."(A/30)

Rita further emphasises that the prevailing ethos of the school is formed by the teachers all being passionate about outings, with the head-teacher's support. Teachers are given autonomy to plan their trips without intervention. Furthermore, unlike many schools where the National Curriculum is the primary concern for conducting educational trips, in this school, it is not the deciding factor. As long as visits can enhance the children's experience they are supported and encouraged by the school. For example, Rita is planning a school visit to the theatre to see a children's play which, she believes it will definitely enrich their language and social experience.

In addition to frequent day trips, every year the children in Year 3 to Year 6 are expected to participate in week-long visits as formal learning sessions in other parts of the country. This

year Rita's and Catherine's classes had a school journey to the educational centre Cardfield for one week to study the local ecological environment. During this stay the children studied local rivers and ponds for their reports about pollution, went into woodland to investigate natural habitats and collected specimens, visited the local power station, and interviewed people there, etc. After returning to the school the children were asked to compile their travel journals, which contained pieces of work they had made during the visit, including hand-drawn maps and pictures, written reports, photographs, specimens, etc.

Rita thinks that the importance of such outing experiences can never be over-emphasised. Apart from the benefit of learning from direct experience she also believes that exposing children to a stimulating and enjoyable environment can in effect nurture a love of learning. It is the essential ingredient for successful learning as she has faith in the idea that how children learn totally depends on children. She illuminates this idea as follows:

"They get to enjoy it, they get to want to do it. You can make a child do it, but if they haven't enjoyed it and wanted to do it, they are not going to absorb as much information as they would do when they are enthusiastic about it.... Education should be really about making children want to learn, to produce independent learning really, to be enthusiastic about something, want to know more about something and have the strategies to go to find out about it without being spoon-fed. They can actually go away and learn how to do it themselves." (A/47)

Enthusiasm is not only the core of Rita's learning philosophy, but also the impetus behind her teaching. She stated that "if you want to make children enthusiastic about it, you must be enthusiastic about it as well". She insists that teachers should have a personal input into the planning of teaching because it needs to be their own work to fully stimulate their enthusiasm about it. It goes without doubt that she is less enthusiastic about the National Curriculum which according to her "is kind of dictating to the teachers how they actually should teach the subjects and is kind of removed from the teachers". Furthermore, she is also upset about the recently introduced literacy and numeracy hours which constantly constrain her plans and time for teaching.

Despite pressure from the National Curriculum, Rita's passion for educational visits still drives her to organise as many outings as possible. With regard to the expenses of visits she explains that it is not a problem for the students' parents to contribute money, since most of the visits just cost the underground train fare or only a small amount for the entrance fee. Her main concern is about arranging sufficient adult assistance for trips, since they are so frequently carried out and most of the parents have work commitments. Fortunately she has one parent who nearly always comes to help at the moment. Moreover, sometimes she can count on the voluntary assistance of students from local colleges and universities. The school welcomes this kind of help and currently has six volunteer students. Three of them regularly help out in Rita's class. Without the help of the particularly supportive parent and the student volunteers, Rita would have to cancel some of the outings.

5.1.3 The Visit to the Natural History Museum (NHM)

5.1.3.1 The Background of the Visit

The visit to the Natural History Museum this term is connected with the topic 'Flora and Fauna'. Although the topic seems to need a scientific focus, it intends to embrace all the subjects of the National Curriculum. For example children can make three- and two-dimensional animal models for Design and Technology and then measure their shapes and volumes for Maths; creative writing and drawing undertaken during the woodland visit is for English and Art; learning Darwin's theory of evolution is for History; studying geographical features of habitats is for Geography, etc. The teaching of this topic is further supplemented by various visits which include a study week at an educational centre and day trips to the places such as the Natural History Museum, Kew Gardens, Holland Park, Gillespie Park in Islington, an urban woodland in Barnsbury, and a rubbish dump in Clacton.

Though Rita and Catherine work together on planning lessons and outings, they sometimes take their own classes out separately on the basis of their individual teaching schedules. It gives them the flexibility to plan their own visits. This time Rita and Catherine will visit the Natural History Museum separately. Normally Rita plans two or three visits to the museum every year for different topics. Earlier this year her class had visited the Earth Gallery twice for a geography project. This term the Ecology Gallery and Gallery 31, which contains fossils from Britain, will be the main agendas of the visit. Although the main reason for her

repeated visits are the wonderful collections in the museum, the friendly atmosphere there is what impresses her most and earns her credit:

“The Natural History Museum is such a lovely museum, it’s quite child-friendly. Whereas you go to some museums and they continually tell children to be quiet and frown at you if you make any noise.... I have been to the museum lots of times and really had nice comments from people who work there saying how well the children work.... I think they are encouraging towards children.” (A/1)

However, with ample outing experiences she also gives some critical comments about the services provided by the museum. She complained that the museum does not offer workshops or guided tours for children, because “the people who work in the museum obviously know a lot more about the subjects than teachers, so it is nice to have their expertise.” Besides Rita is not satisfied with the questions on the worksheets designed by museums in general, including the Natural History Museum. She thinks that “a lot of questions are very direct questions, they don’t actually involve discussing with teachers or promoting listening or instructing information”. Hence she always designs her own worksheets or re-writes the ones provided by the museum to meet her demands and teaching purposes.

5.1.3.2 The Objectives of the Visit

Although the primary reason for the museum visit is to reinforce the work done in the classroom, accumulation of facts is certainly not the end itself. Rita points out that the “investigative skill” is what she wants the children to develop and use when they are learning in a new environment. This skill is essential for independent learning as she states:

“You need it through your entire life. You can’t expect to open a book and find an answer immediately, you need to find out information for yourself. You need to be independent, you can’t rely on people to find the answers for you.” (A/43)

Apparently Rita’s personal learning philosophy influences the objectives of the visit and consequently her expectations of the children’s behaviour in the museum. Putting it more clearly, she expects that: “The children can have a close look at and learn from what they can see and interact with the exhibits there”. She and Catherine re-wrote the questions on the

museum worksheets with this purpose in mind, as she stresses: “If you design your own worksheets, you really know what you want your children to get out of the visit and the visit will be more focused.”

5.1.3.1 The Preparation Before the Visit

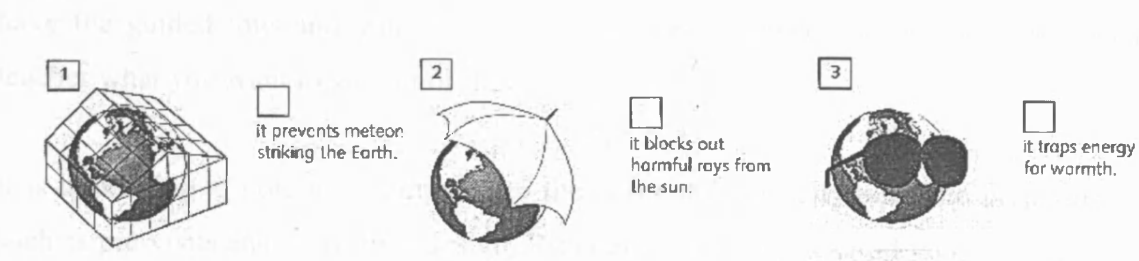
In comparison to the questions designed by the Natural History Museum, she explains the strength of the questions she normally prepared herself for outings:

“The questions weren’t direct questions. For instance, where (in the museum) there were televisions screens, they (children) didn’t immediately turn on the screens and there was the answer. You had to actually listen to it and look at the next screen and gather information when you went along. A lot of the worksheets that museums give children are time-filling. They can just look at it and write down the answers, because the answer is obvious. It doesn’t take a lot of thought....It doesn’t really stretch the children.” (A/46)

The following (Figure 5.2) is a comparison which illustrates the difference between her questions and those designed by the Natural History Museum.

The question on the museum worksheet (Source: Natural History Museum):

Number the Statements to match the diagrams. The atmosphere is vital to life on Earth because...



The question on Rita's worksheet: *Why is the atmosphere vital to life on Earth?*

Figure 5.2 A comparison between questions on the museum's and Rita's worksheets.

Although the above two questions are more or less the same in substance, the way the questions are asked is different, and this means they inevitably involve different thinking processes for the children. Instead of asking the children to tick the boxes as the museum worksheet does, Rita changes the question by simply asking: “Why is the atmosphere vital to life on Earth?” with no clue being provided. This little change unquestionably encourages

the children to look more closely at the exhibits, gather information, and then compose their thoughts in sentences.

5.1.3.3 The Preparation Before the Visit

For this visit Rita did not manage to pre-visit the Ecology Gallery and only Catherine went. However, because she had already been to this gallery several times, she was still able to help with the worksheet design. On all previous occasions they have fully prepared for the visits:

"Always, we (Rita and Catherine) go on a pre-visit. On this Friday after school, we are going to Clacton dump just to check it out for the next week's visit, so we won't be going to the wrong turning and end up in the wrong place; and also if we want to compile our own worksheets then we can do that during the pre-visit, take some notes.... It's hard for us to bring the children to museums where you're not familiar with anything there and you don't really know what you are going to do. I find it quite strange that some schools do this."(A/10)

She further explains that her ideal pre-visit is more than just checking out the physical environment of museums, but includes the attendance of programmes and discussion with the staff there if possible: "I think that you (teachers) really have to visit the museum where you have the guided tour and you can go there a couple of weeks in advance to discuss as a teacher what you want to get out of it."

It is interesting to note that compared to the effort she normally puts into preparing outings, such as pre-visits and worksheet design, Rita did not require the children to do any class-work with special reference to this visit. The main reason for this was that the children, as she assumed, should be quite familiar with the content of the study for this visit, because they were doing all sorts of work for the topic this term and had visited several places already. Hence, though several scientific experiments about plants were carried out during the week of the outing, Rita never drew the children's attention to the coming visit. Nor did she explain its purpose and the rules as most teachers would do. It seemed that the outing was no different to the other lessons which compose a normal school day.

5.1.3.4 The Visit to the NHM

On the morning of the visit a big poster was stuck on a chair which was especially put on the top of the desk at the front of the classroom to remind the children to bring their lunch boxes and clip boards with them and to go to the toilet before the visit. The children immediately did what the poster asked and then quietly assembled on the carpeted area of the classroom. Afterwards Rita very briefly informed the children of the agenda for the day and asked the children to choose their partner for the walk to the museum. This preparation process flowed smoothly within fifteen minutes. At 9:20 am they started the journey accompanied by two adult helpers. Taking the underground train they safely arrived at the school assembly area in the museum at 10:20 am. The impressive efficiency of the whole action showed that Rita and her students have adequate experience of outings.

At 10:30 am the children were in the Ecology Gallery. They were then divided into three groups. Rita had prepared two different kinds of worksheets because her class was made up of mixed age groups and consequently the students needed to be differentiated according to their learning ability. One of these groups would be working on easier worksheets and was assigned to a helper, a parent who always comes to help. Rita took charge of the other group and the third group was given to a student teacher who was doing his training practice with the class. After being quickly informed about the tasks and the assembly time, the three groups of children immediately started to find the information for answering the worksheets under the guidance of the adults.

Inside the Gallery Rita took a dominant teaching role. As a teacher Rita has a higher expectation of her work than just wandering around or keeping the children occupied by giving them worksheets: “ It’s still an intensive teaching session really. You should be talking all the time, explaining all the time and asking the children questions.”

As observed, most of the time she directed the children’s route around the displays according to the questions on the worksheets. The ten children in her group were kept closely around her. If anyone wandered off she would call him/her back or hold his/her hand in order to keep him/her in the group. When she brought the group to an exhibit in most cases she would ask one of the children to read out the relevant question from the worksheets. Before the children started to answer it she rephrased the question again, added some more

information and then provoked a discussion by asking the children to look at the exhibits or the panels, or raised questions about them (Plate 5.5, p. 149).

Because Rita was keen to promote the investigative skills of the children, she guided them to look closely at objects or to search for information. For instance in the Rain Forest section of the display, she constantly called the students' attention to, and questioned them about, different types of plants: "What plants can you see here? If you think about Kew Gardens last week..."; "Can you see that plant, quite a small plant next to the left hand side of the bamboo? What do the leaves look like on that plant?"; "What shape does that plant make? They look like flowers, don't they?"; "What about that one next to it, with a big, big waxy leaves?"; "Oh, look, look, there is something like ferns, all over the floor."; "Can anyone recognise any more of these?"; "Can you come over here a minute? Can you see these leaves down here, kind of pale green and dark green?" It is worth noting that, unlike the 'what's that' type of general question, the ones Rita asked often referred to the plant's size (big/small), shape (like flowers), colour (pale/dark green) and texture (waxy). These questions did encourage the children to look at the objects closely from different angles.

Usually the questions Rita asked received ardent responses from the children. They were not passive receivers of the teacher's words, but eagerly contributed their opinions and asked questions about what they saw. When they were writing answers they spontaneously formed small groups of two or three children, actively discussing and sharing their answers with each other. It seemed that the children were very used to this kind of learning activity; they had become engaged in their tasks immediately without being interrupted by the other school parties passing them. Meanwhile Rita walked around the groups to listen to the children talking, join their discussion or answer the questions they asked.

On average, a great amount of time was spent in front of each exhibit that the children worked on. This indicates that the children were given the opportunity to study objects and information in depth rather than just glancing over them. As a result, it was not surprising that by lunch time the children in Rita's group had not completed their worksheets, even though they had been working in the gallery for nearly one and a half hours. Hence after lunch the children returned and spent another forty minutes in the Ecology Gallery to complete their work, making a total of more than two hours for their stay in this gallery. This is a considerably longer time in comparison to that spent by most school parties in a

single gallery.

In the afternoon, having finished the worksheets, the children in Rita's group were taken to the Gallery 31 where fossils are displayed, to do drawing from observation. The children in the other two groups had already worked there. Rita specifically asked the children to choose one or two fossils which were more challenging to draw in detail. This activity also enabled the children to look at objects in great depth. In a relaxed atmosphere the children were either sitting or lying on the floor, drawing fossils and noting down the information on the text panels (Plate 5.6, p.149); meanwhile Rita and her two helpers walked around the gallery, chatted with the children and frequently gave compliments about their drawings. Once again most of the children became immersed in their tasks regardless of the other visitors passing around them or making noise. Rita was very pleased and commented that the children in her class could concentrate really well on their work. She explained that it was because they went on many visits to different places and were therefore used to working in new environments.

The drawing activity lasted for about thirty minutes. At 1:50 pm Rita assembled the children and took them to see an annual exhibition of wildlife photography. This visit was not on the plan but Rita suddenly decided to include it as an extra because she happened to see that the exhibition was beside Gallery 31. Based on her previous experience she thought it was a wonderful exhibition for the children to enjoy. The children were allowed to look around the photographs for fifteen minutes and were then taken back to the school assembly area for their return journey. A visit to a gift shop would not normally be included in Rita's agenda, nor it was this time. The whole visit was a very focused learning session and finished at 2:10 pm without any waste of time.

5.1.3.5 The Follow-up Work and Comments

When the class got back to the school there were still twenty minutes before the school day was finished. Rita did not take this chance to discuss the visit with the children. Instead she asked the children to quietly read story books, while she quickly looked through the children's worksheets. The next morning the children were divided into two groups to revise their answers according to the two different types of worksheet that had been issued. The group using the easier worksheets was taken to the shared working area outside the classroom

by the student teacher who had accompanied them to the museum. The other group stayed in the classroom and discussed their answers under Rita's guidance. Rita said that informal discussions about what the children had remembered in the museum would be prompted by her from time to time. By doing so she could reinforce their knowledge by referring to their direct experience. Apart from this purpose, verbal discussion with the children was also the most common way for her to monitor their learning in addition to her assessment of their class work. Through the discussion on the worksheets Rita felt that the children had not obtained all the information she had wanted them to extract, especially those who had worked with other helpers, who obviously had less teaching experience. In spite of these shortcomings, Rita would like to think positively about this visiting experience:

"I would like to think that the whole visit is useful to all the children. Obviously, some of them get more out of it than others, but I think that it's so much better to go to see things than me try to explain it from textbooks or through just talking to the children. I think that actually going to physically see something in the museum, to see displays that obviously have been designed well and set up for that purpose is much better than I could possibly achieve in the school." (A/23)

From Rita's comment, it is interesting to highlight that her preconceptions of how the children learn and how the museum could possibly support learning strongly influenced the way she felt about the visit afterwards. In this case, Rita held a firm belief in the learning benefits of outings and this was the motivation behind her frequent visits. As a result, though Rita found that some children did not get as much information as she expected, she would still like to think of the usefulness of this visit in terms of the opportunities the children had to physically see things for themselves in the museum. This finding implies that the teacher's preconceptions, in other words agenda, played an important role in determining how the museum experience was perceived and evaluated afterwards. It may also suggest that the outcome of museum learning is hard to assess immediately, and because of this the teacher probably tended to instinctively follow her preconceptions when she evaluated the usefulness of the museum visit.



Plate 5.1 The layout of Rita's classroom.



Plate 5.2 The informal atmosphere during the lesson.



Plate 5.3 A corner of the classroom displaying real fossils.



Plate 5.4 A corner of the school full of resources for children to study or to play.



Plate 5.5 Rita and children study an exhibit together.



Plate 5.6 Children concentrate on drawing fossils in the museum

5.2 Case Study 2

5.2.1 Features of the School and the Teacher

The case study was carried out in Susan's Year 6 class at a Roman Catholic school in north London. The school is located in a peaceful, leafy residential area where many houses are decorated with beautiful gardening work. Right next to the school is a historical church which has been playing an active role in the life of this community. The school is of medium size with two classes in each year group. It has earned a very high reputation for its academic performance. According to the Standard Assessment Tests (SATs) survey in 1997, the school was one of the most successful in its local borough.

My second participant teacher is Susan. Brought up in a religious family, Susan and her sister both teach at the school. She has eight years of teaching experience and this is her seventh year at this school. She also emphasizes that she has been teaching Year 6 for over five years at this school. In Susan's class there are 31 students from a range of cultural backgrounds, but most of them were born in the UK and speak English as their first language.

5.2.2 The Teacher's View of Educational Visits in School Life

As stated by Susan, educational visits in this school are carried out according to a teacher's own "professional judgement" rather than as a school policy. However, outings are very much encouraged by the school. For example, Susan states that the head-teacher likes to know about visits that have been taking place. In many cases he will actively suggest that a teacher organizes a visit.

Personally, Susan has a very positive attitude towards school visits and regards them as an essential part of school life. In the case of museum visiting she feels that many children now have little access to places like museums, because their parents do not have either the time or economic opportunities to take them there. Furthermore, she feels that a school visit is completely different from a family day out. As a result, the experience children gain during an outing with school cannot be replaced by that shared with their families. She expresses her opinions in the following remarks:

"I think that children get different things out of visits if they go with their schools or go with their parents. With schools, they really have to focus, they really have to behave well. They know that they are going there as part of the school lesson, they have to learn and do work. If they go with their parents a completely different emphasis is put on the day, it's a fun day out, they will go to the cafe or the gift shop, they will walk around the gallery, but they probably do not look at it. Parents are not skilled teachers. I think it's important for parents to take children out definitely, but I do see there is a responsibility for schools to go on visits." (A/35)

From the educational perspective Susan emphasizes that the hands-on exhibits and professionally presented displays in museums do have an enormous impact upon children's learning. This visual material can really "stick in their heads" and help them to "link certain pieces of knowledge". This viewpoint perfectly echoes Susan's philosophy of how children learn, which was revealed in the later interview as follows:

"I think that children learn best if they do things themselves. If I write things on the board they will copy it, but they haven't got a clue what I am talking about. So a lot of the time it has to be spent on hands-on work.... For these children, they spend a lot of time watching television, things literally go in one ear and out the other. They don't take anything in unless they hold something, smell something, touch it or talk about it, all these practical things." (A/38)

The attraction that entertainment media hold over children represents another challenge for Susan's teaching. As she commented: "This generation of children, they need to be entertained to learn. You sometimes in the classroom find that the children want to be entertained not to be educated. For them if you can combine entertaining with educating them, it's really fantastic." Going to a museum is therefore a tactic for Susan to combine learning and playing, and give "them (children) the excitement about the subject".

Apart from the educational concerns, Susan also sees the outing experience from a social aspect. When children come out of the classroom context and into a new environment they have a chance to show their common sense. They will be more grown up and more independent especially when they are in a public place. Apparently, learning has a broad meaning for her in the context of the school trips:

"It's not just about teaching children knowledge, but teaching them how to learn independently: how to use the museum, how to look at the world around them, how to learn from it.... It is also to educate them for life as well." (A/35)

Being positive towards educational visits, Susan has planned five visits for her class over this academic year for different subjects including history, science, art, and religion, and also as an opportunity for a fun day out. She thinks that the schools in London are very lucky, because there are so many places where teachers can take children out to visit for free. Fortunately for her, she also has the support of the children's parents at this school, which makes the outings possible and successful most of the time.

The parents' active involvement in school activities and outings is an evident feature of this school. This is partly because many parents worship regularly at the church next to the school, and the church and the school are closely associated. It is also because the school policy encourages parents to support and help school activities of all forms. On the first day I visited the school, I was introduced to every class. Surprisingly, I found several parents in the infant and lower year classes helping the children with their reading. As for educational visits, parents are invited to accompany the classes, and this is explicitly stated in the school brochure:

"We extend a warm welcome to all parents to help on an Educational Outing with a class. These visits give parents an opportunity to see the children at work and to look at the curriculum in action."

Apart from helping on the visit, the parents of children at the school are also willing to make a financial contribution to the hire of coaches for outings. For Susan, the use of a coach saves a lot of worry about the children's safety on a trip. Apart from the support from the school and parents, the other main consideration which may influence her decision to carry out a visit is whether it is in accordance with the National Curriculum. As she stresses:

"The main factor which influences the visit is whether it fits into the National Curriculum, whether it expands the children's experience and knowledge in the classroom, that's the main influence. Practically, the reason which may stop us going on a visit is whether we can get the coach or whether we can get the parents to come to help. But we can always find a coach and find an extra person to help. So really the only thing which deters the

visit is the educational point of view: whether it makes sense to go." (A/11)

Susan regards this school as a very good example to demonstrate how hard teachers work nowadays to fulfil the demands of the National Curriculum and to "produce good exam results". She admits that her teaching approach has been gradually driven towards more formal and whole class teaching. In addition, formal written tests are frequently practised in her class.

Also due to the National Curriculum, the chances of using educational resources outside the school have been reduced. As Susan states, the outside visits, except those to museums, are less common now. For instance, the teachers in the school used to take the children to the local library, but because there are so many lessons to teach they no longer do this. Although the opportunities for taking children out are getting less, the school invites outside visitors or groups to give talks or conduct workshops to enrich the students' experience or reinforce their knowledge of a particular subject. For instance, during my stay in the school a science workshop was organized in the assembly hall. Two actors were performing a play which told a story about 'Magic Forces'. During the fifty minutes of acting a lot of the scientific principles of natural forces, such as electricity and gravity, were presented to the children in an interesting and dramatic form. Some of these activities have to be paid for by the school. In spite of the financial considerations, as Susan stated, the school always tries to do its best to ensure that the children have as many opportunities as possible.

5.2.3 The Visit to the Natural History Museum (NHM)

5.2.3.1 The Background of the Visit

Every year, Year 6 classes of this school make a visit to the Ecology and Human Biology galleries at the Natural History Museum, during which they are taught the science topic 'Human and Plants as Organisms' as part of the National Curriculum. Based on these past experiences Susan has a very good impression of the museum:

"The museum is very children-friendly. The way the museum is organized makes it easy for teachers to control the children in the gallery. It is usually one entrance, one exit. Normally the galleries are of a size which is right for one class or one year group to work in. As for the practical level they have good dining and cloakroom facilities so that the

children can spend the whole day there and don't have to bother carrying things around with them. These things you have to consider. Also the way the exhibitions are organized is very stimulating for the children. I think that they get a lot out of one visit, perhaps it would take you a whole term to make them understand.... I think it's one of the best museums for the children particularly." (A/5)

In addition, her previous experiences have helped Susan to improve the plan of this visit. One change she has made is in preparing extra worksheets for the afternoon, because she feels that "in the past the children in the afternoon had not been focused, it's been a missed opportunity and almost a waste of the whole afternoon". Besides, she has decided that during this visit the children will be allowed to have fifteen minutes to walk freely around the gallery when they arrive. By doing so the children can have an overall look at the gallery first. It helps them settle down before starting to write their worksheets; otherwise they will be too excited, rushing through the gallery, to concentrate on their work.

5.2.3.2 The Objectives of the Visit

Since the primary purpose of the visit is the reinforcement of the science subject taught in the classroom, Susan expects that the children should have a very clear understanding of the ecological system and the vocabulary used in this subject. Furthermore, the visit is also a revision of the topics of human biology which have already been taught to the children. She admits that the visit is very knowledge-based because: "That's the way the assessment is made at the end of the year.... In Year 6 we really do gear the children to actually pass the exam at the end." There is no doubt that the National Curriculum plays an important role in the planning of this visit.

Along with the strong emphasis on accumulating factual knowledge, Susan also wants the children to learn to behave properly in the museum, to be respectful to the people in their environment and to help other children to answer questions. These social aspects of outings are particularly stressed by her, and mirror the moral values promoted by this church school. There are further examples of this in the routine of life at the school. It was observed that the students are well disciplined: whenever they are on the stairs, they will spontaneously line up and walk quietly on one side. Some of the children are very polite. On one occasion, when I was standing observing the class a child brought me a chair, and this was done without the teacher telling him to do so.

5.2.3.3 The Preparation Before the Visit

The first time when Susan planned a visit to the museum five years ago, she and her colleagues from another Year 6 class made a pre-visit to the museum during the weekend. They checked out the galleries which they thought would be suitable for the children and then asked the museum for relevant information such as the booklets and samples of worksheets. Accordingly, they developed the visiting agenda and adapted the museum worksheets for their children. Generally speaking she is very pleased with the museum worksheets, from which she has prepared her own by selecting suitable questions and editing them according to her visiting plan. In addition, she also prepared a special worksheet for a child with learning difficulties. Susan insists that preparation like this is indispensable to a museum visit:

"To visit any gallery, you really need to prepare as a teacher, with worksheets to focus the children on something. You can't just arrive and say 'Right, children---GO!' because some of them (galleries) are not very accessible for the young children, so you really need to be very clear about your focus when you are going there.... Teachers must know exactly what they want children to do in the gallery, otherwise you are just asking for trouble"

(A/27)

Taking the visit seriously, Susan also has some preparation for the children to do before the visit. For instance, two relevant science sessions were given during the two days prior to the trip. At the first session she revised the subjects concerning the human body which had been taught before and then introduced the concept of food chains with a strong emphasis on any new vocabulary, such as herbivore and omnivore, by writing them noticeably on the blackboard. Immediately after this lesson the children were given a formal written test. As pointed out earlier, Susan often uses the formal written test as a means of preparing the children for their future exams. Moreover, she thinks that tests are necessary for teachers to constantly assess the children's learning so that the future lessons can be planned more appropriately.

The next day Susan revised the topics again. She then referred to the wrong answers found in the test from the day before and clarified them. The next activity was to design the mobile food chains which will hang in the classroom. Before starting the work the children were taken in groups to the school library to do some research. From there they could take

books concerning animals and their habitats back to the classroom to assist their designs (Plate 5.7, p. 162). The making of these colourful swinging food chains once again coincides with Susan's philosophy of how children learn: they can learn better by doing things practically and physically (Plate 5.8, p. 162).

Apart from the cognitive preparation, the children were also well informed about the visit agenda. The afternoon before the visit, two classes gathered in the school assembly hall. In twenty minutes two teachers in turn explained details about the coming visit, including the purpose, the galleries to visit, the tasks to do and the basic rules to follow. For Susan it is essential to settle the children's minds in advance, because for them, she thinks, the most exciting things about outings are the opportunities to have lunch somewhere new or go to the gift shop. It is thus necessary to remind them that the visit is more than a fun day out.

5.2.3.4 The Visit to the NHM

Following a coach journey, two classes arrived at the museum at 10:35 am. Each class was accompanied by two adult helpers. After settling in at the school assembly area, the students were led by their teachers to the Ecology Gallery at about 11:00 am. Before the students entered the gallery Susan once again reminded them of how they should behave and work inside the gallery (Plate 5.9, p. 163). The following is an extract of her instructions which explicitly reveal her expectations for the day's visit:

Teacher: Right, who can remind me of some rules we have to keep while we are in this gallery?

(Susan called on a student to answer).

Student: You said we shouldn't shout...

T: So we are not going to do any shouting. I don't want to hear Kelly going, "Aaron, Aaron, come and look at this." (Susan mimicked a student's shouting). Right, none of that. That's one thing. What else must you not do? You must not push others away when you are looking at things. You must walk around, you mustn't run around, that's very very important. You must not walk on your own. There's no point walking around on your own. It's better to talk about these questions with your friends.

(She called on a student who raised her hand to answer.)

S: You should be sensible and not let your school down.

T: Of course you have to be sensible and not let your school down. Every single time I've

been to this gallery some members of the public have always come up to me and asked "Are you the teacher? Is it your school? Where are these children from? ...", they are always complimentary, they always say good things about how well you read, how well you're helping each other, how well you're moving around the gallery.... What do we do first of all for the first ten, fifteen minutes when we get inside the gallery?

S: We look around first.

T: Yes, look around first. Should we start answering questions straight away?

S: ...(giving an answer)

T: No, you need to find out where all the answers are going to be, don't you? So fifteen minutes, you've got plenty of time to have a good look around.... What can you do if you can't find the answer for a particular question?

S: Ask your friend to help you.

T: Ask a friend from another group to help you, not to tell you what the answer is, but where to find the answer. So don't tell each other the answers, but tell them where they can go to find the answers.... Who can tell me what's the idea today?

S: ...(giving an answer)

T: To look, to look very closely, to observe, to try to take in as much as you can, to learn more about your subject....

After talking she distributed worksheets to the children and then set them free to explore the gallery for fifteen minutes before starting their tasks. Susan did not divide the children into groups for the visit as most teachers do. She explained that if the children were in groups she could only take charge of one group, which makes it impossible for her to overlook the whole class. Therefore, she told the children to work freely with their friends, while she walked back and forth in the gallery to check children's work progress (Plate 5.10, p.163). She regarded her role during the visit to be that of a policewoman:

"You become a policewoman that day because at the front of your mind has to be the safety of the children.... Also most of your energy is going around making sure that children are completing the tasks, guiding them to find the correct answers and encouraging them to read the information, because a lot of them can be very lazy.... You're just like a policewoman directing the answers, it's incredibly hard work." (A/17)

Susan's verbal instructions to the children imply that the main focus of the visit is to answer the prepared questions. The following are several typical examples: "You can find a lot of answers in this section."; "First of all, you need to go back to the African grassland (the

display); you need to answer both questions, don't you?" (directing the children where to find the answers); "Tell me what the question really asks you to do?"; "What is the question? Read it again."; "Do you understand what you are doing for this question?" (making sure the children understand the questions); "Look at the diagram, read these two pieces of text beside it, see if we can find which words can fit it (the question)?"; "You must listen to this (audio-tape) very carefully, make sure you mark the part you've been asked to." (directing the children how to answer the questions.); "Let's see what have you done so far?"; "Have you answered all the questions ? Let me see."; "How did you find the answers for this question?"; "Where did you find this information?" (checking the children's progress and answers).

As she supervised the work of the class by patrolling around the gallery, her students constantly came to her for help. Susan merely interacted with the individual or few children around her and never addressed the whole class. Moreover, she was very busy checking every child's work so that she could only spend a relatively short time with each child, and seldom read the labels or explained the exhibits unless they were directly relevant to the questions on the worksheets. Nor did she encourage the children to closely look at the exhibits even though she had told them to do so before entering the gallery. However, special attention was paid to some children whom she considered needed more help with learning. For instance, she would actively approach them, asking them questions or even accompanying them to look for answers. She also asked the other two helpers in private to keep an eye on these children. Both helpers had some experience of helping out in the school and thus were quite familiar with most of the children in the class. As a result they took a very active role in helping the children work rather than being passive safety guards who only stepped back and watched.

At 12:20 am the two classes assembled together and then left the gallery for lunch. Before going down to the school assembly area Susan deliberately took her class to the toilets for the general public on the ground floor, instead of using those intended for students located in the basement. By doing so she avoided the crowd of school parties during the lunch time. This episode proved that Susan was very familiar with the museum facilities. She also had a thorough plan for every part of the visit.

After lunch, the next area of the museum visited was the Human Biology Gallery. As she had done earlier, Susan briefed the children about their tasks and the time they would have for

this visit before they entered the gallery. Particularly, she stressed to the children that this was a hands-on gallery, which was designed for them to touch and to have fun with. Although Susan gave the children the worksheets with the intention of enabling them to focus on learning, the atmosphere was obviously less formal and serious. Therefore, as soon as they entered the gallery the children spread out and pursued the exhibits which attracted them. In comparison to the visiting routes observed in the morning, this time they were less dictated by the questions on the worksheets.

As for Susan she also looked more relaxed than she had been in the Ecology Gallery. It was very interesting to notice that without a fixed learning agenda - answering the questions - in mind, Susan's attention was more on the exhibits than on the worksheets. In other words, she was no longer chasing after the children to answer the questions, but immersed herself into her students' groups, playing hand-on exhibits with them, interpreting the displays for them and drawing their attention to look at particular exhibits. It was evident that during the afternoon visit she spent a longer time in front of the exhibits with the children and had more sociable and spontaneous conversations with them.

After thirty-five minutes of exploring in the Human Biology Gallery the children were taken to the Mammals Gallery to see the 'huge blue whale' before they went back to the school. For Susan this final stop was a perfect ending for the day's trip because she expected that seeing these unusually large-scale mammals would give the children a thrilling and unforgettable experience. The children quickly walked around the gallery for fifteen minutes, and then were brought directly back to the school assembly area to prepare for their return journey. Since the visiting schedule was so condensed, there was no time left for the children to visit the gift shop as they expected.

5.2.3.5 The Follow-up Work and Comments

After returning to the school, Susan specially praised the children about how well they had behaved in the museum and how proud she was of them. She thought these verbal compliments were very important because it would "make them more grown-up and have more positive thoughts about themselves". This incident confirmed her constant stress on the social function of the visit.

Before she dismissed the class she collected the worksheets from the children. She mentioned that she would quickly check through the sheets that evening so that she could find out how well the children had understood the questions, and thus be ready to efficiently discuss them with the children the next day while their memory was still fresh. The next morning, she discussed the questions on the worksheets, with particular reference to some problematic answers she had found. This informal discussion about the worksheets was only one way of assessing the children's learning, though. Susan also intended to use a formal written test in the near future as a supplement. She explained:

"I found that if the questions (on the worksheets) ask the children to write their answers in sentences a lot of them fail, because they're just being lazy or they think that ticking the boxes is easier. So to get the children to write in sentences, to express what they think is very difficult, and so this kind of written test is what I will do more in the future. Because more and more, children are asked to do this, teachers are asked formally to test children."
(A/23)

Although some children failed to write their answers in sentences, Susan still considered that giving the children worksheets was "a really quite successful way of making them look, making them think about things and making them listen." Moreover, she emphasized that letting them find out the answers on the sheets themselves is an excellent way to improve their independence:

"Because in the classroom, they don't really have to think for themselves. A lot of time they just copy the answers from one sheet to another sheet, or copy from another book. It's very much learning by rote, doing what the teacher says, they don't really have to think for themselves. When they're in the museum they have to go out to find the answers themselves, they have to begin to think for themselves really. They have to know where they are going, they have to be able to read the information, interpret information correctly, to be able to answer the questions. So, it is to increase their independence." (A/29)

In sum, Susan was very satisfied with the whole package of the visit in social and educational terms, as well as the service provided by the museum. She was confident enough to remark: "We've got it (the visit) down to a fine art now". In particular, she pointed out that the appropriate help from parents was the prime factor contributing to the success of this visit:

"I think that we are quite lucky because sometimes you can have a parent come along and it's just like you have an extra child to take care of, they think that they are going on a day out too. I think the reason we are successful is because we have the right parents who know exactly what to do, they know how to work with children, they know what sort of questions to ask, how to get the children to give you the answers rather than telling them what the answer is." (A/26)

The above comment shows that the parental help plays an important part in the visit. However, it is the most difficult part for teachers to predict or control. Susan claimed that she was lucky to get such help. In fact, getting appropriate parental help in her case is not only luck, but also the result of the school's policy of encouraging the parents to participate in all forms of school activity. Having had ample experience of helping out at the school, the two parents who accompanied the visit were able to offer the help that Susan expected.



Plate 5.7 Children are doing their research in the school's library.



Plate 5.8 A display of the colourful swinging food chains in Susan's classroom.



Plate 5.9 Susan reminds the children of the rules and work to do before entering a gallery.



Plate 5.10 Susan is checking the children's progress of doing worksheets.

5.3 Case Study 3

5.3.1 Features of the School and the Teacher

The school is located in an area of the city in east London, which has long been characterised as problematic. According to the official statistics in 1997, the unemployment rate in this area was substantially higher than the average rate in outer London. Furthermore, the reported crime rate was above average for London.⁷⁹ The neighbourhood of the school is generally quite poor. It is one of the so called 'social priority schools': a lot of the students' families have a very low income and 70 % of the children in the school qualify for free school dinners. More than 65% of the students are from families of Pakistani origin, and many others are from India, Turkey, and African countries, etc. Many of them are bilingual but in general their literacy is below the national average.

There is only one class for each year group in this school. My participant teacher, Mike, is a new deputy head-teacher. Although it is his first year teaching in this school, he already has 11 years of teaching experience. He is now taking charge of a Year 4 class which consists of 28 students aged 8 to 9 years-old.

5.3.2 The Teacher's View of Educational Visits in School Life.

I seemed to enter a foreign country when I first visited this school. The children I saw were mostly from the Middle East. There were a few black students among them, white European faces were rare. According to Mike, the school is located in a Pakistani community. Many of the students emigrated to Britain with their parents. Neither they nor their parents have attained a good level of English. This means that raising literacy standards has to be the main concern of the school, and it even provides language classes for both students and parents. In addition, a lot of the parents have serious financial problems, so that a family day out seems to be a luxury to them. Mike recalled that the first time he took the children out, nearly half of them had not been on a train before.

Because of the deprived background of most of the children, educational visits are exceedingly important as Mike stated: "Using something like the museums that are available in London is *really really* essential because these children would just never have an

⁷⁹ *What school?* (1998), London, On Course Publications, p. 353.

opportunity , their parents can't even afford to take them on the train to go to London.” Therefore, as a teacher in this school, “you are quite conscious about giving the children opportunities to experience the things that they wouldn't otherwise have, not necessarily the experiences that children in a middle class school would have.” This intention is closely associated with his firm belief in the role of the school which goes far beyond being a distributor of knowledge:

“Forget the academic, the school has a big role to play in the social development of those children...You want them to have enjoyed their time at school; you want them to remember you as giving them those opportunities ‘oh, yes, we did that’ and in later life what they’ve passed on to their own children, their brothers and sisters, and their enthusiasm for the subjects and places.”(A/37)

At the moment, his fervent belief in enriching the lives of the children is much encouraged by the current school policy. In the past, the school had once been criticised by its school inspector for not making use of outside facilities to support the curriculum, so now a vigorous programme of utilising outside resources is deliberately implemented in order to avoid further criticism. On average the teachers in the school will try to carry out one educational visit every six to eight weeks to reinforce their teaching and link with the curriculum areas. For example, during this term a visit to the British Museum has been arranged by Mike to support the teaching of Roman history; Year 5 students have been to the Tower of London to study Tudor history. Although the cost of the outings is a big concern for the teachers in this school, many of them, as stated by Mike, will do their best to increase the opportunities for taking their classes out. The school also has a special policy for Year 6 students, which pays the full cost for their visits.

The involvement of the surrounding community and the use of local resources are also important concerns for the school, because as Mike explains, they can be used “not just to support, but also to push the curriculum, to make it more practical and bring it to life, make it interesting to the children.” Mike feels that commitment like this has special meaning to those children who have little chance to travel outside but stay in the local community for most of the time. As a result of the school policy, the children are frequently taken to the local library, park and museum in order for them to acquaint themselves with these facilities so that they may use them automatically in their own time. From time to time, members of

the community are invited to the school to share their experience with the students. For example, members from Dr. Barnardo's, a charity organisation, came to the school this term to talk about how children lived during Victorian times; a local poet conducted a drama workshop; a group of actors from the local theatre will perform a Christmas play.

Apart from the social reasons that he underlines, Mike cannot agree more about the educational value of the outings. "The stimulation for the children to want to do their work" is definitely one of the benefits of going on a visit. Raising enthusiasm in learning is especially important to these children because, as Mike further explains, they hardly get any support of this kind from their families. Hence, unless they really motivate themselves and take the initiative in learning, there is no other force to encourage them to study.

From an educational perspective, Mike also believes that 'motivation' is a contributing factor to successful learning. One of his underlying approaches to teaching is trying to make learning as appealing as possible to the children:

"I try to make it (learning) as fun as possible because I remember what it was like when I was in the school: teachers chalked on the board and we noted it down, that was it. I just try to bring it alive as much as possible.... There is something about our teaching - you must step back and put yourself into the shoes of a child: is it going to be of interest to them?" (A/42)

Likewise, Mike puts a strong emphasis on the practical experience gained from outings through physically seeing or doing things as part of the learning, "because otherwise it means nothing to the children." In his teaching experience, he often encounters situations where the children do not acquire a proper understanding of very simple ideas even though they can rote learn them. He comments that situations like this often remind him about the essence of the hands-on experience for children:

"It's quite shocking sometimes and it takes you back as a teacher that they have no concept of that at all. It is something reminding me of early years education. I think you get what the importance of this is: how essential it is that they (children) have hands-on experience. They can contextualise their heart and mind for what they do. They can verbalise it or recall the ideas, see changes happening. Without that, I just think that later on, this is the way they get a mental block; they just can't understand something." (A/52)

In order to put his educational ideas in daily practice, he expects a classroom to be a vibrant and attractive learning environment which can stimulate the children as well as enable them to interact with it. Accordingly, he mentions that he constantly changes the displays relating to the subjects he is teaching as well as making them as interactive as possible. In this way, “the information has been put there for them in an easy format to access” so that children can be motivated to look at, make comments, raise questions and thereby learn from the displays “instead of strolling through a lot of textbooks”. In the case of teaching about bones in the human body, he hangs up many x-ray photographs to illustrate the bones inside the body (Plate 5. 11, p.177). In addition, he likes the children to physically do things such as making models in order to exemplify abstract concepts. For example, the children were asked to make models of the human skeletons by using straws to represent the bone structures of the human body (Plate 5.12, p. 177).

In principle, Mike’s attitude towards education is attuned to the educational philosophy popular in the 1970s, as he comments:

“Before 1989, there was no curriculum for teachers to follow but the quality of education in the 1970s was far better in the basic English skills and Maths... because people had a much heavier emphasis on doing it and there was a much greater link between different curriculum areas and a more creative atmosphere in schools, much much more emphasis on art and display, not just the information given. There was a much more liberal attitude towards education in the 1970s.” (A/47)

In spite of his nostalgic feelings towards education in the past, Mike admits that education without a specified curriculum has some major flaws as well as benefits. As he comments: “If you were in a school with good teachers, it was brilliant and it worked wonderfully for children. But if, unfortunately, the school didn’t have good teachers, it failed in a big big way.” The possibility of this kind of failure particularly applied to his school because there is only one teacher for each year group and it is very difficult for an individual teacher to prepare all the learning material appropriate to the children. As a result, the school started to adopt the teaching schemes prescribed by the National Curriculum. Mike comments that the National Curriculum is very keen on the use of resources outside the school. For example, the science scheme he is now following for the subject of the human body even specifies:

“visit a museum which has displays of skeletons.”⁸⁰ Therefore, using museums to support teaching is more than his personal enterprise but a recommended national policy.

5.3.3 The Visit to the Natural History Museum (NHM)

5.3.3.1 The Background of the Visit

Since Mike has always been teaching in London, he is quite familiar with using the Natural History Museum to enhance the teaching he does in school. Regarding this visit, the fundamental premise is to support the science curriculum, with a particular reference to what the students are now being taught: “Humans have skeletons and muscles to support their bodies and help them to move.”⁸¹ For teaching science, it is essential in Mike’s view “to enlighten the children and make the children enthusiastic about their study, it involves not only talking about it; they really need to see things at first-hand.” Apart from this, it is also part of the current school policy which encourages the teachers to expose their children to areas of cultural heritage like museums and to enrich their life experience as much as possible.

Moreover, Mike particularly likes to invite parents to accompany the class on outings, not only for the purpose of looking after the children but also for giving them the opportunities to visit museums themselves. He comments that museums in this country are “awfully under used” and there is “some sort of working class attitude” towards them. However, he thinks that “there is no snobbish image of the Natural History Museum...it was built to better people and to enlighten people.” Therefore, in his opinion, the museum is more culturally accessible to the parents of the children at the school, who are often from ethnic minorities as well as from deprived social backgrounds. Above all, as far as learning is concerned, he is very pleased with the accessibility of the museum in many other aspects:

“I suppose historically, it’s one of the most developed museums in the whole of Britain. It has a very good reputation for supporting schools and for the resource materials it provides for schools. It is also very accessible, I think it is one of the most convenient places to get to and from in London.... It is a very child-friendly museum as well, compared to the Science Museum. The Science Museum is not as accessible to children. Teachers have got to have

⁸⁰ *Scheme of Work for Science* (1998), “Unite 4: Moving and Growing”, Qualification and Curriculum Authority, p.1.

⁸¹ National Curriculum (1995), Science, Key Stage 2, Life Processes and Living Things, p.9.

gone there beforehand and know what they are saying. We were saying the other day about how much the parents would need to know to help the children during visits, I don't think that parents would be able to help the children in the Science Museum. Thinking of the levels of how you use the Natural History Museum: you can use it with nursery children, you can use it with degree students, you can differentiate whatever level you want. Whereas in other museums, the levels of understanding the concepts the children need to know before the visit, they're not immediately accessible to them." (A/27)

Mike thinks that the content of the museum is very comprehensive and the purpose of this visit is more than just the acquisition of information. He therefore plans a very open agenda for this trip: children will be divided into small groups and placed under the charge of the parents; they will be allowed to freely explore the museum to see as many galleries as they want as long as they pay special attention to the creatures displayed, which can be connected or contrasted with the subject of the human body being taught in school.

5.3.3.2 The Objectives of the Visit

As with the visiting agenda, the objective of the visit that Mike held is quite broad. For instance, though it is an educational visit, it actually opens many social experiences that the children would seldom have otherwise, such as visiting with their peers, and learning social manners in a public place. On this day, for the enrichment of the children's experience, a visit to the gift shop is also to be included in the itinerary. As far as learning is concerned, Mike will not dictate to the children about where to visit and what to look at, nor will he ask them to do any work in the museum. In principle, he intends to let the children follow their own interests in order to expose them to the museum as much as possible.

The reason behind this arrangement lies in his personal belief in the spontaneity of learning. From his point of view, what children generate during the learning process is really essential; sometimes they raise questions which may not relate to the subject taught but are too valuable to be ignored by the teacher. Upholding this viewpoint, Mike thus assumes that "when we get there on the visit, lots of things occur which are not necessarily planned. If the children become interested in something they see or hear about, that will come out as the objectives during the visit. When we come back to the school, we can discuss them and recall our ideas."

Furthermore, Mike asserts: “what they (the children) can bring into discussions is, I think, very important.” By means of discussions, he expects that the children should be motivated into looking closely at objects and trying to “construct the correct sentences and use the specific terminology” when they talk to Mike or read labels. Apart from the science curriculum he is teaching, literacy is also an important subject Mike is planning to incorporate into the visit. This intention relates to the current national education policy which gives priority to literacy and maths among the curriculum subjects. The school works very hard in raising the children’s literacy standard because most of them are below the national average. As a result, “literacy is the most important subject and it goes to every subject we teach; we do have a very high emphasis on vocabulary and terminology.” In this case, it is clearly observed that the National Curriculum and the school policy do have an impact on the visit even though the whole learning objective of the visit seems to be less explicitly defined by Mike.

5.3.3.3 The Preparation Before the Visit

Mike did not check out the visiting route beforehand, nor did he prepare worksheets for the children to do during the visit. His information about the museum was based on his previous experience, and to a greater extent on the help received from the museum staff he contacted when he booked the visit. Mike is very pleased with the services provided by the staff, who not only sent him an information pack but also recommended which galleries would be suitable in relation to the attainment targets he intended to achieve. This definitely helped him to plan the trip without a pre-visit. He commented about the school services of the museum as follows:

“ ...the museum staff are always very specific about the context of the visit and what galleries you are going to see because they are quite concerned that certain galleries are not overcrowded, to enable the children to see everything they need to see and to do any work they need to do like observation or sketches while they are there.... They (the museum staff) have to justify very varied and sound education programmes by informing schools and publicizing. They also do a lot of advertising of the courses available to teachers there. So they are very clear about the National Curriculum and try their best to support the schools that are coming.” (A/29)

As pointed out earlier, the visit was to support the science subject “Humans as Organisms”, and much relevant class work had already been done such as drawing the anatomical features of the human body and modelling of the human skeleton from straws. The day before the visit, the children were asked to do an “observation sketch” of a model skull. The main purpose of this activity was not to draw the skeleton as a whole but the shadows cast on the bones and joints of the model, thus encouraging more intensive study. Accordingly, before the children started, Mike demonstrated how they should draw as well as reminding them about the details that needed to be looked at. After the activity, the children were assembled on the carpeted area of the classroom and were informed about the next day’s trip. Mike explained the purpose of going to the museum: how they could learn from paying extra attention to the bones, muscles and the bodies of animals displayed there. The Dinosaurs Gallery which displays huge skeletons was also highlighted. This immediately aroused the children’s interest and they eagerly asked questions about the gallery. The rules to be obeyed in the museum were stressed to the children, too.

5.3.3.4 The Visit to the NHM

Since Mike encouraged parents to come on school trips, seven relatives and family members of the children turned up in the class on the day of the visit. Including Mike and one assistant teacher, there were nine adults accompanying twenty-eight children for this trip; it indeed formed a very high adult/children ratio. Having said that, the attitudes of these helpers seemed more to be in having a fun day out themselves than assisting the teacher. For instance, one of them was the teenage sister of a student, who expressed how excited she was to be having a day off from work and visiting the museum for the first time; another was a grandmother who could not speak English. Many of them even brought cameras and were eagerly taking photographs of the children on the underground train, before they had even arrived at the museum.

The class arrived at the school assembly area of the museum around 10:50 am. Mike then distributed maps of the museum to the helpers and informed them of the meeting time for lunch. Afterwards, the children were divided into nine small groups and were assigned to their adult helpers. Before the groups went off to visit the museum on their own, Mike, once again, briefly reminded the class about the aim of the visit, that is, to look at the bodies of humans and animals.

It is interesting to consider that each group, consisting of three children on average, was relatively small compared to those of most school parties. Mike was very pleased with this, saying that “ the input you can give them on a one to one base is much more. They can focus and remember and concentrate on what they are looking at much better.” In addition, unlike Rita and Susan, Mike did not assign any work for the children to do during the visit. The reason was in part that, according to his recent experience of a school trip to the British Museum, many of the children in his class did not cope with worksheets very well and did not complete their work. Moreover, he also believed that a visit should above all generate interests in the children. He did not want to bore them with writing or drawing, but instead expected them to see as many things and ask as many questions as possible.

At around 11 am, the nine groups accompanied by adults started their visits separately. Mike began the visit with three children who he thought had discipline problems. Although he had several destinations in mind such as Human Biology, Mammal and Dinosaurs Galleries, the visiting route on the whole did not follow a fixed plan. Most of the time, they wandered around the museum and stopped for a close look when objects appealed to them. It was only at the beginning of the visit that Mike had a chance to lead the group because at that stage the children were not used to the environment of the museum and kept close to the teacher. After a few minutes of orientation, the children started to wander off and from then on often used their own initiative to determine where to go and what to see while Mike followed behind. In many circumstances, Mike had to hold the children’s hands in order to control the pace of the visit or to make them look at objects he wished them to see. By the end of the visit, they had already been to many parts of the Life Galleries. Some of the visits such, as the Birds Gallery and Ecology Gallery, seemed to happen by chance and some places, such as the Evolution Gallery, were visited following the requests from the children.⁸²

Like the visiting route, the teaching in the museum throughout the whole visit was very spontaneous but intensive. As discussed earlier, since the aim of the visit, in terms of what to see and where to go, was not so clear to the children, Mike made extra efforts to focus their minds on learning whenever he got the chance. To attract their attention to certain objects, his most common approach was to ask questions which required observation and comparison skills. Many questions he asked were actually quite challenging and involved profound

⁸² Near the end of the visit, one of the children, out of curiosity, urged the teacher to take them to the top floor of the museum, which happened to be the Evolution Gallery.

thinking processes and sometimes succeeded in expanding the children's cognition. The following extract is an example demonstrating how Mike tried to help the children to understand the function of an animal's tail. It also shows how later on one child spontaneously used the newly learnt concept to refer to an object she saw.

Mike and the children gathered around a hung skeleton of an extinct mammal (Plate 5.13; p.178). Mike started to ask the children questions by pointing to the back of the skeleton:

Mike: "... Why do you think this bone is here at the back of the feet?"

Student1 : "To balance it..."

M: "Yes, to balance it.... What is it on the skeleton that keeps the creature balanced, that we humans don't have? Come and stand back, have a look. Something we haven't got but it's balancing that extinct mammal?"

One of the students pointed to the feet of the mammal and Mike commented on this: "It's the feet, the back of each foot is bigger, yes? Just think about how heavy the creature must have been. Look, look, (Mike called the children's attention and pointed to the tail of the mammal), its tail at the back is what's actually helping it to balance and stay upright. Some dinosaurs and extinct mammals can do that. Think which creatures can actually stand upright like a human."

S2: "Monkeys."

M: " Monkeys can, yes."

S2: "Kangaroos."

M: "Kangaroos can yes, and their tails help them balance."

Then the group moved to the Birds Gallery and looked at the diverse examples of birds from all over the world (Plate 5.14, p.178). After a while, one of the students was attracted to a bird and called for the teacher: "Sir, sir, look at this. This one has long things (feathers) at the back. Does it help it balance?"

M: " Yes, it would help it balance. That's a very sensible question."

The following example also shows that Mike used questions and clues, instead of direct instruction, to promote the children's thinking. It also clearly displays Mike's agenda for the visit, which was to compare human and animal bodies whenever he got the chance.

The group stopped in front of a display showing the skeletons of different types of mammal. Mike started to question the children:

M: "Which one of the creatures is nearest to the human body?"

S: "That one." (The student pointed to one skeleton)

M: "Why did you say that?"

S: "Because it's got arms and legs."

M: "Do you remember the human skeleton we saw outside before we came in?"

The student thought for a while and said: " Oh, because it stands up."

M: "Yes, very good, because it stands up."

As observed, questioning was an important part of the rich verbal conversation between Mike and the children. However, it is very interesting to note that the questions raised by the children were mostly of the informative type, such as "What is it?", "Where is it from?" and "Is it real?" As far as meaningful learning is concerned, the above examples show how Mike's questions often guided and stimulated the children's thinking process. This phenomenon could be explained by Vygotsky's theory which recognizes the importance of an adult in a child's 'zone of proximal development' of cognition (cf. 3.3, p.68). In this case, it is Mike - the adult – who plays a dominant role in helping the children to develop their thinking or pursue knowledge on their own.

Apart from the main concern of seeing human and animal bodies, Mike also picked exhibits which attracted him but were not necessarily relevant to the main topic. For example, in the Ecology Gallery, where no skeletons were displayed, he and the students spent some time (28 minutes) there, reading labels, watching the videos and playing with hands-on exhibits. Some new concepts such as herbivore and omnivore were also introduced to the children. Teaching took place whenever the chance presented itself (Plates 5.15 and 5.16, p. 179). From time to time, Mike would deliberately ask the children to read the labels or texts and then explain the meanings of the terminology shown. This teaching behaviour was consistent with his emphasis on literacy as he had addressed before the visit.

Throughout the visit, Mike had a very intensive but informal interaction with his own group, which consisted only of three children. Unfortunately, the only chance he had to interact with the other groups or the helpers was the lunch time. Therefore, he explained that he had

to rely heavily on the helpers' input to the children in the other groups and admitted that some parents might be less reliable than the children. Hence, he tried to make the visit as informal as possible and then, after returning to the school, he would reinforce the children's experience by discussing with them, recalling their ideas, correcting their misconceptions, etc.

5.3.3.5 The Follow-up Work and Comments

The day after the visit, the children were asked to 'brain storm' with their group members and to write down what impressed them most during the visit. This was done on big posters which were going to be shown to the rest of the class. After the group discussion, the class assembled on the carpeted area and then each group of children presented their posters and shared their experience of the visit. The purpose of this activity was, according to Mike, to understand where the children had been and what they had seen since he was not with most of the children during the visit. Furthermore, throughout the discussion, he was able to assess what the children had learnt, which served as a prominent guideline for the next stage of his teaching. In addition, the visit was not a one-off event but an ongoing process. The experience generated from it would definitely be recalled, and reinforced throughout the rest of the term.

When asked about his impression of the visit, Mike gave many positive comments which can be summed up on three fronts. Firstly, he highly complimented the learning environment created by the museum, which even extended to the design of the texts and diagrams:

"The building is very attractive, very stimulating. You go in, there is a very big staircase, with a big dinosaur in the middle, and every gallery we went in is 'Wow!' I think, as a museum, it is very stimulating, very visual. I think they've (the museum staff) thought very carefully. The writing and the diagrams are at a level children can see. At a lot of other places, it's too high for children to read. The vocabulary they use as well is very good: the dinosaurs and some creatures have their names phonetically spelt out. Also for the children, the comparison of height with the human being makes it real for them. Without that sort of information, some of them would just pass, 'Oh, it's just another skeleton whatever.' (Mike mimicked the tired voice of a child.) When put into focus, they would say 'Oh, yes!' (Mike mimicked the very excited voice of a child), they remember and they keep talking about the things." (A/32)

Secondly, after a series of discussions with the children, he was very surprised to find that the children had learned much more than he had expected: "They got a lot more out of the visit than I anticipated they would have done. I think that their capability for assimilating information has proved me wrong; they've been more successful, they actually have the ability of connecting things." He illustrated his surprise as follows:

"For example, we've been talking about vertebrates and invertebrates, but we only briefly talked about it before we went. There is one child who saw a shell in the museum and read some information about creatures without spines inside them.... They registered some information, they probably did not discuss it, they just observed something by looking at different exhibits. We are now comparing the vertebrate group and invertebrate group every child in the class by the end of the session understood it fully. I didn't anticipate that level of success.... I got through that side of things, this new concept of views, much quicker than I anticipated. And next week we are going to learn about muscles, they are already asking questions. The enthusiasm they brought back is quite considerable." (A/32)

Last but not least, Mike pointed out the fact that the children were motivated to find out more information on their own, and this is obviously another positive result of the visit. One child in his class went to the library to look for answers. Another child was planning to go to the museum again with his parents, because he wanted to go back to see an exhibit that had caught his eye during the trip. It seems that the visit ignited the children's interest in the outside world. It was also highly appreciated by Mike as he thought that "their lives just need to be enriched so much". It is then fair to comment that the visit was very satisfactory from both social and educational perspectives.



Plate 5.11 A display of x-ray photos of human skeletons in Mike's classroom.



Plate 5.12 Children's work--- models of skeletons made of straws.



Plate 5.13 The model of an extinct mammal.



Plate 5.14 Mike and children are looking at feathers of birds together.



Plate 5.15 Mike directs children's attention to closely look at an exhibit.

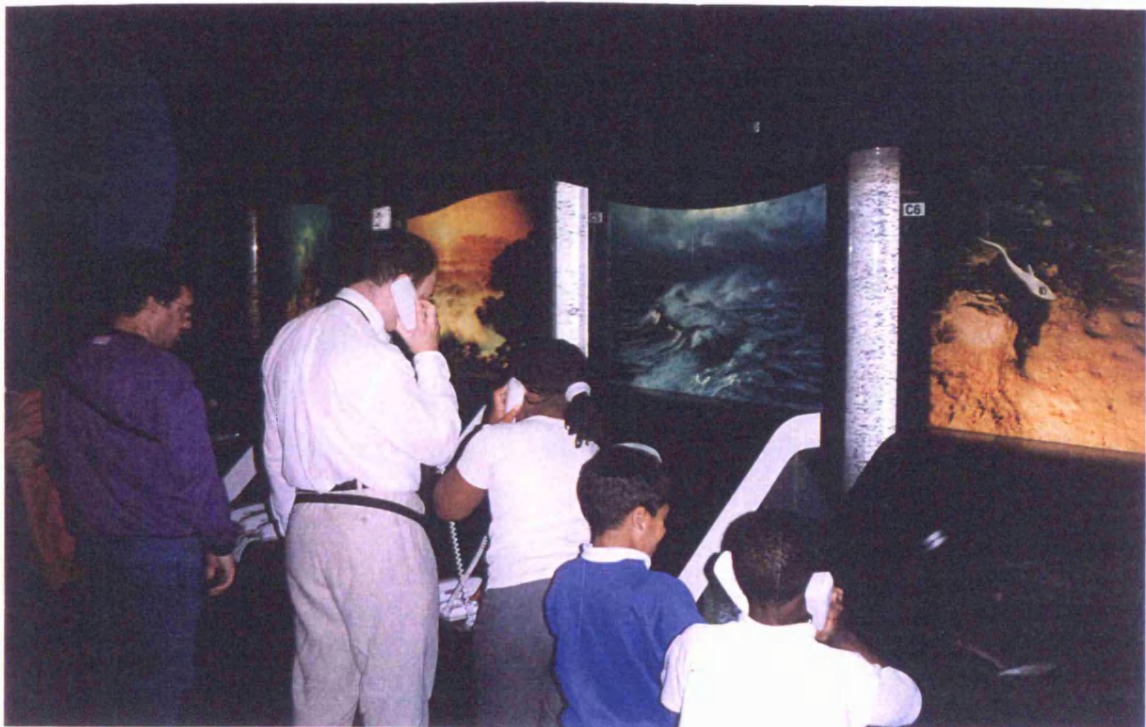


Plate 5.16 Mike plays hands-on exhibits with children.

Conclusion

In this chapter, three school visits to the Natural History Museum, London were described in detail. By comparing these three case studies, several findings can be summarised as follows:

1. The most significant factor which prompted these three English teachers to organise the museum visits was their strong beliefs in the educational benefits children can gain from such visits. Although it was the teachers who took the initiative, the museum visits were actively supported by the teachers' colleagues and head teachers.
2. The educational system in England granted the teachers sufficient autonomy to decide on and plan a museum visit according to their teaching needs. In addition, the National Curriculum did explicitly encourage outings to maximize children's learning experiences. Although the recent educational reform had put more constraints on the teachers, they still tried to overcome these difficulties and carried out museum visits as often as possible.
3. As discussed above, school visits to museums were supported by English primary schools, both ideologically and structurally, to a great extent. The agendas for the visits were closely related to teachers' educational beliefs and the requirements of the NC. On one hand, the visits were aimed at extending various aspects of children's learning experiences, such as broadening horizons, increasing first-hand experience, training independent learning skills, and raising interest in the subject taught. At the same time, the visits were carried out in order to reinforce the subject knowledge prescribed by the National Curriculum. As a part of their classes, teachers had done some form of preparation for themselves or for the children to maximise the learning outcomes.
4. Teachers' agendas manifested themselves during the visits at the museum in several ways, including the choice of places they went to, the tasks the children were asked to do, and the teaching roles that the teachers played. However, it is worth noting that although the teachers tried to avoid direct instructions and tended to use a child-led learning approach, on some occasions, the teachers led the children to find answers by keeping them closely in a group (as in Rita's case) or directing them to find correct answers (as in Susan's case).
5. The teachers' comments on the usefulness of the visits were linked to whether their agendas were achieved or not. Interestingly, despite the fact that the teachers were not satisfied with the children's work done in their worksheets, they were generally happy with the other learning experiences which children gained from the visits, such as the

social experience, first-hand experience of the world around them, and motivation for learning.

How do the patterns described above relate to the broader context of English primary schooling? To what extent are they different from the patterns found in the Taiwanese case studies? These questions will be answered in Chapter 7. Before that, Chapter 6 will continue to present another three case studies conducted in Taiwan.

CHAPTER 6

CASE STUDY--- TAIWAN

Introduction

This chapter presents three case studies of Taiwanese teachers' agendas and experiences of school visits to the National Museum of Natural Science, Taichung, which are compared to the three English case studies as seen in Chapter 5. The format of the three Taiwanese cases is the same as that of the English case studies in order to make these case studies comparable to each other. As in the English case studies, the three participant teachers were deliberately selected from different types of schools in terms of the school size, namely large, medium and small.

6.1 Case Study 1

6.1.1 Features of the School and the Teacher

The first Taiwanese case study was carried out in an inner city school with a history dating back nearly one hundred years. The school was established when Taiwan was still a colony of Japan. It was once very large, with more than 120 classes. It was divided into three smaller schools eight years ago, the original school still has 67 classes with more than 2,800 students and 130 teachers in total. My main participant teacher Hwang is a homeroom teacher of a Grade 4 class which consists of 42 students aged 10-11 years old. She is also a grade leader of eleven homeroom teachers of Grade 4, coordinating the school administration and the teaching staff. Like the majority of primary school teachers in Taiwan, Hwang graduated from a teacher training college which is regulated by the Ministry of Education. So far she has been teaching for 24 years. As an experienced teacher, she is now supervising a trainee teacher who practises his internship in her class. In addition to Hwang, the case study interviewed the teacher Chen, who is also an administrator in charge of school outings, and a teacher of natural science for Hwang's class.

6.1.2 The Teacher's Views of Educational Visits in the School Life

Compared to its English counterparts, the school is astoundingly big in size. However, this scale is not unusual for an inner city school, according to Hwang, but is just above average compared to most schools in Taichung.⁸³ In spite of its considerably large size, the school operates efficiently by means of a strictly defined administrative system: under the principal, there are several management offices designated to specific administrative responsibilities (see Figure 2.2, p.43). Furthermore, in order to coordinate the administrative work and the teaching, a grade leader is elected among the teachers of each grade group to service this purpose.

A sense of uniformity can also be easily observed in the school. For example, the classrooms are similar in terms of size, layout and decoration. The rooms are normally four-walled and square, containing rows of seats facing a big blackboard in the front with students' art work tidily displayed at the back (Plate 6.1, p. 196). As far as learning is concerned, in order to implement the national educational policy and curriculum, the Office of Pedagogy regulates all the issues about teaching and learning. Its work includes managing student registration, arranging classes and teaching staff, scheduling lessons and teaching targets, preparing teaching equipment and aids, and evaluating students' learning. Among the diverse tasks, it is also in charge of various school activities, including educational outings. By doing this, the school can ensure that, within each grade, teaching follows the same targets, schedules and content, as well as allowing learning to be regularly evaluated by standard formats.

Under such control, life in the school is orderly and predictable: a clear timetable is set up by the Office of Pedagogy at the beginning of each term and posted on the wall outside each classroom. Everyday lessons are regulated by the timetable and students have to bring the relevant textbooks, which are the same across each grade. Each subject has its own textbook, and this even applies to subjects such as Art, Music and Physical education. Along with textbooks, teaching manuals for each subject giving the explicit instructions as to how to

⁸³ According to the Ministry of Education's statistics in 2000, more than 40% of schools in Taichung have a size which is over 49 classes.

teach the content of textbooks are also prepared for teachers.⁸⁴ Furthermore, unlike in England where primary teachers are responsible for all curriculum areas, in Taiwan a system of specialist teachers for the subjects such as Natural Science, Art, Music and Physical Education starts from the third up to the sixth Grade. A homeroom teacher is responsible for teaching the rest of the subjects⁸⁵ as well as for dealing with everyday affairs for the children such as supervising their cleaning duties and homework, eating lunch with them and teaching them manners and so on. Under such a curriculum design, it is fair to comment that teaching at the primary level in Taiwan is very subject-based compared to that in England where topic-based teaching can still be observed in many, if not all, schools.

After learning about some of the characteristics of life in this school, it is easy to understand teacher Hwang's attitude towards outings, which is largely shaped by the school context in this case. As far as an educational visit is concerned, Hwang frankly expresses that it is not valued nor encouraged at all by the school. Unless it is really necessary for implementing the requirements of the local educational authority, the school rarely takes the initiative to carry out educational visits. Decisions and arrangements of outings are always made by the Office of Pedagogy. As a teacher, Hwang has very limited authority over outings under such the "bureaucratic" administrative system of the school as she has described. The school even declared that as a matter of school policy, outings carried out by an individual teacher will not be welcomed. Visits carried out by an individual teacher, according to Hwang, have never been held in the school so far.

Concern for the children's safety is the biggest reason behind the school's unenthusiastic attitude towards and centralized control over outings. Teacher Chen, who is a specialist teacher of physical education and also an administrator for the Office of Pedagogy in charge of school activities, expresses the stand of the school as follows:

"... Unless it is really necessary, we won't take the children out as much as we would like because of concerns about the children's safety. Sometimes accidents happen that are beyond our control and expectation.... We don't encourage our teachers to take children out individually, neither. We only permit outings when they are organized by the school

⁸⁴ The use of teacher manuals is subject to individual teachers. However, it is fair to say that most teachers, though they may not exactly follow the instructions, will use teacher manuals as a basic guidance and reference for teaching textbooks.

⁸⁵ The subjects include Chinese Language, Mathematics, Social Studies, Life, Ethics and Health Education, Homework Guiding, Group Activities and Local Studies.

as events for the whole school so that the school can arrange the transportation and insurance for students and can keep a watchful eye on visits undertaken. If unfortunately something happens, the school can then assume the responsibility and handle it.” (A/11)

It is not only the school but also teacher Hwang, who is unwilling to take the risk of outings because, as a homeroom teacher, it would be her responsibility to take care of forty-two children, the size of the class, entirely by herself. A homeroom teacher normally gets very little help from specialist teachers or parents. Most specialist teachers are teaching several classes across different grades, so they may have other classes to teach during the day of the outing and thus cannot go on a visit. Furthermore, they may feel much less responsible or obliged to offer help if a visit does not directly relate to their subject teaching. In both cases, a homeroom teacher is assumed to take sole responsibility for the outing.

When questioned about parental help for a visit, both teacher Hwang and Chen were hesitant, saying that there is no such custom in the school nor have they come across this idea before. It is a very interesting situation considering that the school has 60-70 voluntary “Ai-Shing Ma-Ma” (literally meaning kind mother), a kind of parental help common in many primary schools in Taiwan, who come to help on a regular basis. However, according to Chen, their help is mainly limited to the support of administrative work such as arranging books in the library, preparing school lunch or escorting children to cross the road, etc. Any help involved in teaching such as offering a hand in a class or accompanying a visit is never required by the school. The reason behind this, as explained by Chen after a moment’s reflection, may be due to the consideration that teachers may feel uncomfortable if they try to discipline children while their parents are present.

Apart from concerns about the children’s safety, there are other reasons that deter the teachers from organising outings. First of all, Hwang thinks that all the fuss in relation to preparations for a visit, such as arranging coaches and insurance, collecting money from children, and planning an itinerary, will inevitably add a burden to her already overloaded work. As she complains, apart from teaching and dealing with all sorts of affairs of the class, the rest of her time is fully occupied by checking the students’ homework. Checking students’ written work may be the most exhausting chore for teachers. A recent survey conducted by the Taipei Bureau of Education shows that, on average, primary students in

Taiwan spend two hours and fifty minutes per day on their homework.⁸⁶ Accordingly, it is not difficult to imagine the collective amount of work likely to be produced by a class which normally consists of at least forty students. As I have witnessed, there are always piles of exercise books on the teacher's desk waiting to be checked.

Because of the heavy work load, Hwang thinks that "many teachers have little time to reflect on their practice or to improve their teaching, let alone the spare time or energy to arrange an outing." Under these circumstances, she has a feeling that many teachers become reluctant to expand their teaching resources beyond textbooks, let alone beyond the walls of the school. In addition to this, Hwang also considers that outings may interfere with the tight teaching schedule set forth by the Office of Pedagogy, and consequently, interfere with students' outcomes of exams. If it occurred, it would probably lead to complaints from some parents who, she thinks, still pay the most attention to test results. She gives the following comments about parents' attitudes towards outings:

"Parents in Taiwan don't value educational visits very much. Although they are very concerned about their children's learning, they only put a great emphasis on exam results. As for this kind of latent, imperceptible learning, they don't value it so much nor do they think outings are important. It is the common feeling for most parents. Some of them who are very traditional even think outings may interfere with children's learning in the school. Of course, there are still some parents who have a new concept of learning and would think outings are important, but this kind of parent would normally prefer to take their children out by themselves because they may feel the learning quality of a school trip is not very good." (A/41)

From an educational perspective, she is also quite reserved about what children can learn from a school trip and believes that outings should be the parents', rather than the school's, responsibility as she says:

"Most teachers would expect as few outings as possible or they would prefer the parents to take on the responsibility of taking their children out. In fact, I think that the use of educational resources outside the school should be mainly the responsibility of parents because children can get better instruction on a one to one basis and the time spent on a

⁸⁶ United News, 1999, May 25.(In Chinese)

trip is much more flexible. A school visit is always constrained by time and schedule. Besides, there is not much quality about a school visit as a bunch of students always crowds in front of an object, so what they can learn is rather limited.” (A/6)

Surprisingly, teacher Chen also has a similar view regarding the duty of utilizing resources outside the school. In the case of visiting a museum, he expresses his viewpoint as follows:

“I think that the main purpose of a school visit to a museum is to “pao zhuan yin yu”⁸⁷, in the hope that after the visit children will introduce it to their parents so that they, as a family, will visit it again in their own time.... For the school, the primary task is to popularize museum visits, at least letting children know where the resources are available. As for what children can learn from a school trip, this is not a major concern of the school.” (A/2)

Based on the above comments, it seems that the learning value of outings is not recognized much by both teachers and the school. One of reasons behind it, apparently, is due to the strong emphasis the school puts on collective academic performance rather than individual development put forth by the school. As discussed, the school always sets up uniform teaching targets for teachers to follow and standard test formats for the evaluation of the children’s learning. Accordingly, it is fair to suggest that the main concerns of the school, as well as the teachers, are the achievement of teaching targets and the test results of the children as a whole. With regard to an individual’s learning or interest development, this, on the other hand, is often left to parents. Therefore, both Hwang and Chen would expect parents rather than the school to take charge of museum visits, especially as the learning environment of a museum is more suitable for an individual student than for the whole class.

6.1.3 The Visit to the National Museum of Natural Science (NMNS)

6.1.3.1 The Background of the Visit

Visiting the National Museum of Natural Science is an annual event for all primary schools in Taichung, required by the Education Department of the city. In order to monitor the usage of the museum, schools have to write official reports, detailing the dates, schedules and the numbers of students, to the Department after their visits. The purpose of it, as suggested by

⁸⁷ A Chinese phrase. It means that taking an initiative in doing something, in the hope others may follow.

teacher Chen, is as follows:

“It’s a unique opportunity to have this museum in Taichung. The government has invested an enormous amount of money and people on the museum. If schools in Taichung don’t even use it, it would be quite unfair to schools from other cities, which even hire coaches, spending hours on road to come to the museum. Therefore, the Educational Department of Taichung will demand its local schools use the museum as often as possible, at least once a year” (A/5)

Under this demand, the school will arrange a museum visit every year for the children of Grades 3-6. It is always an activity for the whole school and is never conducted by an individual teacher. With regard to this visit, all preparations before the visit were done by the school, such as hiring coaches, arranging insurance, contacting the museum, planning the visiting agenda etc. As a homeroom teacher, Hwang was just simply notified about the date and schedule of the visit. Based on her previous experience, she considered the visit, for the children, as a fun day out; on the other hand, for the teachers, it is just “an annual routine” that needs to be completed. As for her impression of the museum, she commented that the museum has excellent equipment and facilities and furthermore, has very good specialists in its field. As far as she knew, many schools in Taichung have asked the museum for assistance with their science projects, such as providing scientific equipment or consulting its staff, for entering national competitions among schools. Personally, except for school trips, she has never used the resources of the museum for her teaching, but sometimes she would visit it with her own children during the weekends for leisure purposes.

6.1.3.2 The Objectives of the Visit

Since the visit was compulsory and irrelevant to her teaching, Hwang had no particular objective for the visit as far as learning was concerned. Furthermore, Hwang expected her class to have a guided tour in the museum, therefore, she preferred to let the museum take responsibility for teaching the children and regarded her duty as being to look after the children’s safety.

Ideally, she felt it would be better if the children could have natural science teachers to accompany them during the visit. But the school, as usual, did not require them to come. Chen explained the school policy as follows:

"I think it doesn't really matter if natural science teachers come on the visit or not. As I have said, the main purpose of this trip is to popularise the museum visits, what children can learn from it is secondary. Besides, we have arranged guided tours for the children and have homeroom teachers to look after their safety, it's not so necessary for specialist teachers to come." (A/4)

Without the requirement of the school, most specialist teachers, according to Hwang, would never go on a visit. The natural science teacher for Hwang's class, for example, was not going to the museum. In part, it was because she has other classes to teach on the day of the outing. Partly, she also felt that the main purpose of the visit was to let the children understand the museum rather than to attain specific knowledge. Due to the above reasons, she had never been to the museum with a school trip so far, though she had been a natural science teacher for many years.

6.1.3.3 The Preparation Before the Visit

Most of the preparation for the visit had been done by the school, including contacting the museum. However, the communication between the school and the museum was quite poor. For example, although guided tours for the visit had been booked, the school had no idea at all about the content of these tours or which galleries were going to be visited. In fact, the school did not make any effort to obtain more details nor did the museum offer this information. With regard to the services for schools, the museum had a system of recruiting a Ke Lao Shi (natural science teacher) from each school to be co-ordinator and regularly sending leaflets to schools. However, this system did not work as was expected in this case. According to Hwang, the duty of a Ke Lao Shi in the school was merely to put the monthly museum leaflets on the school notice board and seldom to participate in the process of planning a museum visit. As for the leaflets, she felt very doubtful about their effect since she seldom read them herself.

Being a group leader of homeroom teachers of Grade 4, Hwang's main responsibility was to collect trip money from other classes. The trip fee was 100 NT (about 2 pounds) per child, half of which was for the entrance fee for the museum, and the other half for travel express. Based on the museum's policy, schools are charged 50NT per child except on Wednesdays when the admittance for school parties is free. In order to save money, many schools will

arrange visits for Wednesdays, so it is not difficult to imagine how crowded the museum is on that day of the week. The school used to arrange museum visits on Wednesdays for free admittance, too. However, this time it was decided that the children should pay for their visit in order to avoid the crowds and thus enhance the quality of the visit.

With regard to the class work done by the children, neither Hwang nor the specialist teacher had prepared anything for their class except that, on the day before the visit, Hwang briefly informed the children about the trip and reminded them what to wear. Hwang's explanation for the absence of any other preparation for the children was that she felt that it was impossible for her to do anything in advance because she did not receive any information regarding the visit from either the museum or the school. She also found it difficult to impart any relevant subject knowledge to the children since the visit was irrelevant to her teaching. She explained that other homeroom teachers had similar feelings of reluctance:

"Normally most homeroom teachers will regard teaching about the visit to be one of the natural science teachers' responsibilities, not ours... The systems of subject teaching and specialist teachers have resulted in the situation that many teachers only care for the subjects they teach. As for the other subjects irrelevant to their teaching, they don't pay attention to nor do they know how to prepare for them. Also, many teachers are afraid of giving the wrong information to children, especially if they are teaching the subject of natural science. If they impart the wrong information to students, it is a very serious problem. Therefore, many homeroom teachers are reluctant to do any work relating to the visit for the children. In addition, they may think that the children will have guided tours in the museum, so they don't think it as necessary to do any teaching for the visit in advance." (A/10)

Nevertheless, Hwang also acknowledged that although homeroom teachers did not teach the subject of natural science, they should have some basic knowledge of it as the teaching training they had received included all curriculum subjects. However, due to the passive attitude toward outings, most of homeroom teachers would not take the initiative to prepare for the visit themselves.

6.1.3.4 The Visit to the NMNS

On the day of the visit, ten coaches carried eleven Grade 4 classes, comprising four hundred

and fifty students, to the museum (Plate 6.2, p. 196). Each class was accompanied by its homeroom teacher without any adult helpers. In addition, though the Office of Pedagogy arranged the event, no one from the Office went on the trip so that Hwang, as a grade leader, had to take charge of the visit. She was very busy making arrangements with coach drivers, the teachers and later the museum staff. Therefore, Wu, a trainee teacher supervised by Hwang, also went on the trip to help her.

The museum was actually not far away from the school. It only took about ten minutes to get there by coach. There is no convenient public transport system, such as an underground railway, in Taichung, so taking coaches has become the most common means for schools to come to the museum. At the time of the children's arrival, the museum had yet to open. All of the children squatted down and waited quietly in the square for the museum to open at nine o'clock. As soon as it opened, one of the museum staff came to lead the children inside the building. Due to the lack of a school assembly area, the children all crowded together in the entrance hall of the museum to wait for their guided tours that had been booked in advance.

For Hwang, having a guided tour, was a necessity as far as the children's learning was concerned. Although Hwang thought that the quality of guides varied, depending on individual styles and experience, she still insisted that a tour guide was imperative to a museum visit and could not be simply replaced by a school teacher. This was because, as she further explained, a guide had been specially trained by the museum and thus had more professional knowledge about the content of displays. The school would also try to book one for every visit if possible. She further explained its importance to children's learning as follows:

"The age of our children is still very young. Without a guide to lead them around the museum, they may just hurriedly glance over objects over without catching the essential points. If our children were old enough such as junior or senior high school students, they could pay attention to and read the labels carefully. On the contrary, our children are still very young so sometimes they cannot fully understand the explanations on the labels as some of them are written with lots of terminology. If we have a guide, we can learn not only the superficial meaning of an object but also the in-depth information such as the background or theory behind it." (A/16)

After a while, the museum sent seven tour guides to receive seven classes, which meant that another four classes were left without the service of a guided tour. Hwang was very upset about this arrangement as she was expecting that each class would have one guided tour each. She complained that the incident was due to lack of communication between the school and the museum: when the guided tours were booked, the school, on one hand, did not seek further information about the content of these tours and how many guides would be available. On the other hand, nor did the museum take the initiative to inform the school about the insufficient numbers of the guides. Hwang then negotiated with the museum and eventually had four more guides to serve the children. However, because it was an unscheduled arrangement and the museum did not have enough staff at hand, one of them was a volunteer guide trained by the museum for emergency cases like this.

Around 9: 15 am, each class was respectively led away by its tour guide. The volunteer guide took charge of Hwang's class. Since the school has no agenda for what the children should be looking at, the choice of the visiting route was entirely up to the volunteer guide. The guide decided to take the class to the gallery of Chinese Spiritual Life. While the children were touring the gallery with the guide, Hwang, as a grade leader, went to pay for the entrance fee. During her absence, she had asked the trainee teacher Wu to oversee the children. It was interesting to note that the trainee teacher showed an indifferent attitude towards joining in with the guided tour. Most of the time, Wu wandered around the gallery himself and looked at other exhibits instead of listening to the guide with the children. As for the children, though they were not overseen by Wu, they still behaved well and paid great attention to the guide's words, some of them even automatically taking notes without being asked. Meanwhile the guide talked through a microphone, giving detailed information about the objects selected (Plate 6.3, p.197).

Despite the intensive teaching and learning atmosphere as described above, there was very little interaction between the children and the guide. None of the children were asked questions or encouraged by the guide to raise a discussion. As for other learning skills, such as observation or investigation, they were not exercised either. Near to the end of the tour, Hwang came back to join the group. As soon as she joined the tour, she just simply followed the group and listened to the guide as did the children. Throughout the tour, the interaction between the guide and the group was merely one way. However, the children seemed to be used to this kind of teaching approach. Even though some children seemed to

lose their concentration, on the whole, the class remained quite and orderly. Finally, the tour ended at 10: 10 am, having lasted for nearly one hour.

When the tour was finished, Hwang asked the children to applaud the guide and thank her for the talk. Afterwards, Hwang immediately took the children to A Bird's Eye View Theatre to watch a film. After that, Hwang was again in a hurry as she took the children to the Environment Theatre to see another film "The Four Seasons" (Plate 6.4, p. 197). When the film ended, it was already 11:15 am and only fifteen minutes were left before the assembly for the return journey.

Hwang explained why she had led the children to successively view the films instead of letting them looking around the museum. According to her previous experience, Hwang thought watching films could be more effective in gaining more information and systematic knowledge compared to hastily touring around the museum. She said:

"A film shown at the theatres is a condensation of essential points. It can give you more information and more powerful impressions in a short time compared to wandering around the museum. Because its content has been logically synthesized, the knowledge children receive will be more articulate and systematic. Of course, it would be better if the children could look at relevant displays after watching a film. But we don't have enough time left so we can only watch films this time." (A/71)

After seeing the film, due to the limited time left, Hwang did not take the children to see other areas of the museum but just asked them to go to the toilet. Once the class assembled again, Hwang gave some reminders to the children to conclude the visit. First, she asked the children to closely look at the labels besides the minerals displayed and said:

"Each stone displayed here has its own label. There is a lot of information and explanations on it, which will help you understand about the stone more. So next time if you come to the museum again, don't just glance over the displays, you have to read the labels, too."

Hwang's words once again indicate her hidden stress on the accumulation of information as she did not ask the children to observe the objects but to carefully read the labels. In

addition, she asked the children to come to the museum again with their parents if they were interested. It reflected her attitude, as stated earlier, that the main purpose of a school visit is to popularise museum visiting in the hope that children will go to museums with their parents in their own time.

6.1.3.5 The Follow-up Work and Comments

The children returned to the school before noon and then had lunch. In the afternoon they had lessons as usual and there was no further discussion about the visit. As for Hwang, she was expecting that the natural science teacher would discuss the visit with the children. On the other hand, the natural science teacher did not take an interest in asking the children about their museum experience. She felt that it was inappropriate for her to discuss the visit with the children as she had not even attended it. When asked about her comments on the visit, Hwang was not very positive about how much the children had learned. One of the reasons, she thought, was that the guide spent too much time on one single gallery so that many children had lost their concentration. Moreover, the topic of the gallery was Chinese spiritual life and this was too abstract for children of this age to understand. The above shortcomings, Hwang suggested, may have been partly due to the inexperience of the guide as she was a volunteer rather than a fully qualified museum educator.

Hwang went on to complain about the incident at the beginning of the visit when there was a lack of the tour guides. She was upset that both the museum and the school regarded the visit as an official routine and carried it out negligently. She was disappointed at the museum's services in many ways:

"I have visited many museums abroad and I find the standard of the facilities at the National Museum of Natural Science to be as good as those. However, its administrative and planning work are very bad. The museum spends most of the money on its facilities but ignores its administration which should be of prime importance. Furthermore, its publicity is not effective enough. Though the museum urges schools to visit, it never tells teachers how to use its facilities. Also, the museum never clearly informs us what it really wants us to gain from a visit." (A/74)

As for the school's attitude, she felt that the school was merely concerned about the safety of the children and nothing else. As long as the children came back to the school safely, the

task was then complete. Hence, the school did not take a positive approach in arranging the visiting agenda. This was also why unsatisfactory incidents had happened repeatedly but no solution had been found by the school. This kind of perfunctory attitude actually reflects a part of the teaching culture in Taiwan, as Hwang further analysed:

“I feel that the biggest reason (for the perfunctory attitude towards outings) is that most teachers become inert after a long teaching career. They are not enthusiastic about doing research anymore. They have no pressure of being promoted or being demoted so they are not active in developing their teaching profession. Teaching becomes a daily routine, just following textbooks to teach. It doesn’t occur to them to expand teaching resources or to utilize resources outside the school. On the other hand, teachers normally have a very heavy workload so they don’t have spare time to develop teaching materials to supplement their teaching.” (A/75)

Hwang’s comments reveal the fundamental reason why the school lacked a defined museum agenda and for the teachers lack of an interest in outings. This situation deteriorates when the museum fails to effectively inform or advise schools about how to appropriately use the museum or what to gain from it. In addition, being a homeroom teacher, Hwang did not feel responsible or competent enough to teach about the subjects related to the visit. As a result, both the school and the teacher tended to heavily rely on the museum’s services such as guide tours or educational films without exerting further input into the visit.



Plate 6.1 One sight of Hwang's classroom.



Plate 6.2 Children are taking coaches to the museum.



Plate 6.3 Children are listening to the tour guide.



Plate 6.4 Children are waiting for entering the theatre to see the film in the museum.

6.2 Case Study 2

6.2.1 The Features of the School and the Teachers

The school is located in a suburban area of Taichung city, where the population is comparatively low, being mainly employed in agriculture or factories. Because of the geographical location, the size of the school is much smaller than most others in Taichung: there are merely fourteen classes with each year made up of two or three classes, and each class containing fewer than thirty pupils. Accordingly, in 1998 the school was required to participate in the experimental teaching of small classes as a part of the Educational Reform. Grade 3 and Grade 4 were chosen for this trial. The main condition for the school being able to participate in this new teaching approach is that the number of students in a class should be under thirty. This is judged to be smaller compared to the majority of classes (72%) in Taiwan, which have more than 30 students⁸⁸. By controlling student numbers, a teacher is then expected to be in a better position to nourish the individual needs of each pupil. Moreover, in contrast to the traditional whole class teaching methods, such class design also encourages innovative teaching approaches which increase the interaction between teachers and students.

The teacher participating in this study, Lin, has 15 years of teaching experience at the primary level and has taught in this school for 11 years. He is now a homeroom teacher of a Grade 3 class, which is one of the experimental teaching classes as described above. In his class, there are only 28 students, all aged between 9 and 10 years old. He is also the leader of the Grade 3 teachers, although there are only two teachers involved. In addition to Lin, teacher Tan, a staff member of the Office of Pedagogy organising the museum visit, will also be interviewed in this study.

6.2.2 The Teacher's View of Educational Visits in the School Life

Small class teaching is one of the aims of the Educational Reform in Taiwan. Before this policy can eventually be implemented by all primary schools, some schools are required by their local educational authorities to participate in this experimental teaching. In this case, the school started to take part in the experiment in 1998. Based on the guidelines given by

⁸⁸ The statistic is based on Ministry of Education (MOE) data (2000: 72).

the Ministry of Education, the school then developed its own teaching objectives and strategies for small class teaching. Two of its fundamental objectives are as follows:

1. Respect the individuality of each student and provide learning opportunities for students to develop their potential, in order to fulfil the ideals of equal educational opportunities and social justice.
2. Improve the interaction between teachers and students, and develop teaching strategies for each student, based on individual speciality, in order to create an environment where students can actively and happily learn.⁸⁹

In order to put the objectives into practice, teachers are expected to “flexibly use teaching content and material based on the different needs and cognitive structures of students” and “to use diverse evaluating methods instead of written tests”⁹⁰ to assess children’s learning. Apart from these requirements, establishing a close link with the community and conducting school visits are also part of the plan, as an attempt to “utilise educational resources outside the school to assist the classroom teaching” and to “broaden the children’s horizons and their life experience”.⁹¹

Teacher Lin is a proponent of this approach. “The learning process is more important than outcomes of tests” is the phrase he repeatedly emphasises to me. This is in tune with the principle of small class teaching, requiring teachers to pay more attention to the needs and development of individual children. In practice, in his class, there are fewer formal written tests compared to many other classes in Taiwan, which dutifully take formal exams every month. Other distinctive features manifesting this innovation can also be observed in his class. For example, in order to increase the opportunities for students to share their opinions rather than just passively listening to the teachers, the seats in his class are arranged to form five small groups in each of which students are able to see and talk to each other (Plate 6.5, p.213). It is obviously different from the usual layout of a classroom in Taiwan— rows of seats uniformly facing the big blackboard in front. In addition, to create a more relaxing and less formal learning atmosphere, Lin always calls the children by their first names, or sometimes nicknames, while most teachers usually call their students by their full names.

⁸⁹ ‘The plan and practice of small class teaching’, an unpublished school report.

⁹⁰ *ibid.*

⁹¹ *ibid.*

Furthermore, the children in Lin's class do not have to stand up and bow to Lin when classes start and end, though it is a ritual widely practised in Taiwan for students to show their respect and gratitude to teachers for lecturing them.

Although new teaching approaches are favourably practised in Lin's class, it is interesting to observe that, to a large extent, traditions still remain. It indeed makes Lin's class an experimental venue in which many contradictory perceptions and practices are confronted. For example, though formal writing tests are deliberately reduced as a school policy, informal ones are commonly exercised and are taken rather seriously. As I encountered several times during my stay in Lin's class, even for a casual test, the students were asked to put their bags up on their desks to prevent cheating. The atmosphere was no less tense than that of a formal exam (Plate 6.6, p. 213). Furthermore, the results of these tests have to be reviewed by their parents, who are required to add their signatures to the children's work each day. In addition, though in theory teachers using the new approaches are expected to devise teaching materials themselves to meet the individual needs of the students, textbooks are still the main source for Lin's teaching. As Lin confirmed, the only material he has ever designed so far was for the subject of Native Art Teaching Activities because the distinctiveness of each local area makes the topic impossible to be covered by uniform textbooks. Furthermore, everyday practice still precisely follows the timetable and teaching targets put forth by the school, although in theory Lin is supposed to flexibly adjust his teaching schedules in accordance with the children's learning process. These paradoxes are further confirmed by Lin's comments:

"Although one of the aims of small class teaching is to encourage teachers to adjust their teaching schedules and materials, this flexibility, in fact, is very limited in practice. I can only change the schedules of some subjects, such as social history or local native art activities, these kinds of subject. As for the main subjects including Chinese, maths and science, we can't overlook them, we have to complete the teaching schedule and cover every bit of the textbooks. Besides, if you really miss teaching something in the textbooks, the parents will notice it immediately. They will question you and suspect that you are not doing your job properly." (A/37)

These conflicting phenomena in teaching practice are also reflected by the discordant attitude towards outings in the school. For example, from a social perspective, Lin claims that

primary education should be closely associated with the children's daily life; an outing, therefore, can be used to enrich their experience. Although Lin thought education at primary level should be more experience-oriented as stated above, he admitted that the experience generated from an outing is hardly ever applied to the class teaching because it is normally irrelevant to the curriculum. Furthermore, frequent outings are not approved by him because they will influence or delay the teaching schedules set up by the school. Surprisingly, Lin is not the only teacher with this attitude. Teacher Tan, who is in charge of school outings, reveals a similar opinion:

"I think that primary education is a general knowledge education. Since it is education for general knowledge, a visit to a museum fits into this general category. So it is not essential to make the visit relate to the class teaching or the curriculum. Besides, in terms of teaching in schools, teachers already have textbooks and equipment to teach the lessons, so it is not necessary for them to go on a visit for this purpose as well." (A/13)

From Lin's and Tan's comments, it is fair to suggest that completing the schedule and delivering the content of the curriculum and textbooks are teachers' primary concerns in school. Consequently, an outing, which is not on the statutory requirements of the curriculum, is merely appreciated for its general benefits such as the enhancement of the children's social experience. Another possible explanation for this neglect may be the teachers' ignorance of the educational potential of outings. As most teachers in Taiwan are so used to teaching from textbooks, they have little experience of using resources outside schools (Plate 6.7, p.214). Accordingly, they may not be aware of the educational possibilities an outing can create.

Since school visits are regarded as dispensable adjuncts to teaching, they are not carried out as enthusiastically as is intended in the plan of small class teaching. In Lin's case, he had arranged visits for the new subject Native Art Teaching Activities but no other part of the curriculum. So far, there were two short trips conducted by him and another teacher of Grade 3 this semester for this subject. Because the purpose of these trips was to let the children familiarise themselves with their local environment, the places visited included local markets, temples and parks. All were within walking distance of the school.

Within walking distance of the school is the deciding factor when Lin considers a visit. As Lin emphasises, a visiting place which is too far to be reached by walking from the school will neither be considered by him nor be approved by the school. One of the reasons given by Lin is that most teachers are too busy with teaching to prepare for outings. In addition, it is also customary that most of the administrative work at the school is arranged by the school, teachers normally have little authority nor experience to arrange long-distance outings by themselves. Above all, it is the safety of the children that really concerns Lin. He will only take the children to local areas he is familiar with, and where he feels competent to control any unforeseen happenings. Otherwise, he would rather let the school take charge of outings in order to lessen his responsibility and preparation work.

Children's safety is always the major concern and sometimes the main reason for teachers being deterred from planning an outing. Especially when the current climate in education empowers parents' voices, teachers are even more cautious of any criticism from them. Teacher Tan believes that this is the main reason why so few teachers are willing to conduct outings now. He comments:

"Parents now are very different from those in the past. In the past, parents always respected, and seldom complained about what the teachers said or did. Now teachers just don't have such superior authority any more, and parents are becoming more critical of their teaching. So, if any accident occurs during an outing, teachers not only have to take the whole responsibility but may also face criticism and even court action. Very few teachers nowadays are willing to take this kind of risk themselves." (A/19)

Although parents may vigorously voice their opinions, it does not mean that they devote the same level of enthusiasm to school activities. According to Lin, the parents of the children in his class show limited interest in participating in the activities specially designed for the purpose of small class teaching. He constantly encounters the problems that many parents do not help out with the children's projects, which are deliberately designed to have open-ended answers or other forms of presentation instead of a written report. These kinds of assignments normally require parents' assistance, such as accompanying children to find information in libraries, discussing topics with them, showing them how to use computers and other devices to present their assignments.

The indifference among the parents described above does not suggest that they care little about their children's learning. On the contrary, as Lin mentions earlier, many parents still diligently check the children's test results and the content of textbooks in order to monitor their learning progress in the school. Lin suggests that the parents' indifferent attitude towards the methods of small class teaching may be due to their lack of understanding of the purpose of this innovation. As Lin further explains, many parents in his class are farmers or labourers; they are less well informed so that they simply do not know how to help their children in the new ways of learning.

With regard to awareness of the new approach, the teachers participating in this project are not that well informed either. Lin states that he completed a training course lasting only three day (eighteen hours in total) prior to the start of this new practice. In other words, teachers are given too little time to learn about this innovative approach, which has aims and pedagogy very different to those of traditional teaching. Undertaking this new approach, Lin reflects, is like an exploratory process full of trials and errors, particularly as he has no predecessors to follow, nor advisors to consult. It may explain why so many conflicting teaching practices were observed in Lin's class.

6.2.3 The Visit to the National Museum of Natural Science (NMNS)

6.2.3.1 The Background of the Visit

As happened every year, the visit was conducted at the demand of the Education Department of Taichung City, and required a school report afterwards. Teacher Tan, in charge of this visit, deems such official requirements to be inappropriate because they violate the school autonomy, which has been the aim of the Educational Reform to grant more power to schools. Nevertheless, he also acknowledged that it is the most efficient way to promote museum visits, as most schools tend to be reluctant to conduct outings unless it is compulsory. From the stand point of this school, because most of its children are from less affluent areas and have fewer opportunities to visit places like museums, the idea of the museum visit is welcomed in the school, as all classes of Grade 1-6 are asked to participate and the visiting fees are sometimes subsidised.

Because the school is comparatively small in size, the visit is always a whole school activity attended by all students on the same day. All the administrative work necessary for the visit was organised by the Office of Pedagogy. As a homeroom teacher, Lin was only given a rough schedule: all senior students were to have an identical visiting programme, which included a lesson about astronomy in the Space Theatre, a lesson in the Classroom Theatre and a guided tour of a gallery.

Normally, a visit to the National Museum of Natural Science takes half a day. However, this time, a visit to a temporary exhibition at Taichung Cultural Centre was to take place in the afternoon. It was a touring exhibition organised by the National Palace Museum. The purpose of this exhibition was to introduce the precious collections to an audience, living outside the capital, Taipei, where the Museum was located. To promote this exhibition, the Educational Department in Taichung sent a letter to all its local schools, encouraging them to visit. Although attendance was not compulsory, the school decided to go after visiting the museum as this additional activity would not cause extra trouble (such as the arrangement of transportation) but would give the children a unique opportunity to see this invaluable collection.

Lin said that he had made occasional visits to Taichung Cultural Centre, but in comparison he was a frequent visitor to the National Museum of Natural Science and could not recall how many times he had been there. Apart from the school visits, he often came to the museum with his family on weekends. One reason for his frequent visits was his strong interest in natural science, as he was once a specialist teacher of this subject. However, even with the basic knowledge of natural science, Lin commented that the content of the museum was not immediately accessible to him, not to mention children or other visitors without such knowledge. Hence, as far as children's learning was concerned, he considered a guided tour essential:

"Having a tour guide is very important because he/she provides the audience with more in-depth knowledge about the content of displays. Also, he/she has more understanding of the messages the museum intends to deliver to its visitors. The role of a teacher, on the other hand, is to maintain order among the group while the guide is giving a talk. Children are all the same--- they tend to be better behaved while their teachers are present. Therefore, a guide won't be interrupted by the noise or disorderly behaviour of the children.

He/she can then fully express what he knows to them.” (A/6)

From the above comments, it is clear that for Lin, a museum guide is a specialist who has profound subject knowledge. Such an image also reflects his impression of the museum---an academic institution where the content and displays are specially designed by the experts as described by him. Apart from this scholarly image, he also thought of the museum as an ideal place for a family day out as his family often visit the museum during weekends.

6.2.3.2 The Objectives of the Visit

From the school’s standpoint, the main objective was to introduce the museum to the children in order to broaden their horizons, rather than to gain any specific knowledge. Besides, the school also arranged for the children to attend the museum’s educational activities. Hence, the school, according to Tan, did not feel it necessary to require the specialist teachers to accompany the visit; it was left to each individual teacher to decide whether to go or not.

The natural science teacher for Lin’s class was unable to go this time. Having the dual duties of being a specialist teacher and the head of the Accounting Office, she explained that she still had some administrative work to do on the day of the visit. For Lin, whether the specialist teacher could join the outing or not, it was not a big issue. This was partly because he did not see this visit as part of the teaching curriculum, and also because the children would be attending the museum’s educational programmes during most of the visit.

Although the objective of the visit was very general, with no specific learning purposes, Lin still articulated his expectations of the children during the visit:

“I hope that the children can pay attention to the talk given by the tour guide. From the talk, they may find something that really interests them, so that in the future they can come back to the museum with their parents to have a more in-depth study, or they can come back themselves when they are older.... I hope they can watch the films carefully and listen to the lectures carefully. If they can learn one or two things from those, even if it’s only a little bit, I think it’s enough.” (A/5)

It is very important to analyse Lin's comments. As he repeatedly emphasised, the children were expected to listen carefully to the guide's talk rather than behave in any other way. It indicates that he still treated the children as passive rather than active learners, who could be fed information as long as they were paying attention to the subject teaching, which could be a talk, a film, or any form of constructed lesson. Lin's concept of learning is not unusual; it is indeed prevalent in Taiwan, in spite of the promotion of alternative methods in accordance with the Educational Reform. What is really surprising in this case is that Lin still unconsciously possessed the traditional idea of learning, as his comments reveal, even though at the same time he declared himself not only an advocate but also a practitioner of the new approach in schooling.

6.2.3.3 The Preparation Before the Visit

The Office of Pedagogy had to do all the preparation work, including arranging transportation and insurance for the students. The overall schedule and the museum activities that the children were going to attend were also decided by the office. After the initial plan was settled, the office had to contact the museum to book a visit and to check the availability of their chosen activities.

Booking a visit and educational activities at the museum is not as easy a task as it may first seem. Actually, the process is rather complicated and time-consuming. Unlike the Natural History Museum in London which has a team to undertake school bookings, no such department is responsible for school visits at the NMNS. In fact, there is only one member of staff dealing with all school bookings for the three most popular activities in the museum, namely, general visits to the exhibition halls, guided tours and lessons in Classroom Theatres. In other words, if schools require special educational programmes, such as visits to the Space Theatre, participation in Science Workshops, or assistance from in-school services, they have to contact the respective departments responsible for those programmes themselves.

The lack of a special department which caters for the needs of schools and co-ordinates the different educational provisions of the museum, inevitably causes much trouble and confusion for schools. The existing system is not only inefficient but also fails to advise schools on how they can best make use of the museum services. Every year the museum does send out a booklet informing schools of its educational services and their booking procedures.

Despite having this information, Tan complained that when planning a visit for the whole school, he might still encounter questions or problems needing clarification or answering by the museum staff. The absence of sufficient services for schools did result in an incident during this visit, which will unfold as this case proceeds.

Luckily, Lin did not have to deal with troubles relating to booking visits. His main duties before the visit were merely to collect trip fees from students and to inform them about the coming visit. However, Lin had done more work than just this. The day before the visit, he wrote down the visiting itinerary on the blackboard and asked the children to copy it down in their “lian luo bu”⁹² so that the parents would have a general idea about the visit. Afterwards, he spent about twenty minutes discussing the museum activities they were going to attend. In particular, he highlighted the importance of the educators at the museum, by claiming that they are very knowledgeable about the exhibits, and so the children should pay full attention to their talks. Although it did not have any defined learning objectives, Lin believed that this kind of preparation for the children was necessary as it might stimulate their interest in the visit and help them to focus on the objects and lessons. Otherwise the children would probably not know what to do or see in the museum.

6.2.3.4 The Visit to the NMNS

The day of the visit was hot and sunny. Prior to their departure, nearly four hundred children were grouped in order of their ages and classes in the playground for the morning assembly (Plate 6.8, p. 214). The principal stood on a platform, speaking from a microphone, exhorting the children to behave well in the museum. The children left the school by coach at 8:20 am. For the junior classes of Grades 1-2, each class was accompanied by two “kind mothers”. As to the senior students, they were overseen by their homeroom teachers. Neither specialist teachers nor the staff of the Office of Pedagogy joined the tour.

Although the school is located on the edge of Taichung County, it only took about 15 minutes for the coaches to reach the museum located in central Taichung. After their arrival, the first activity for the senior students was to take a lesson in the Space Theatre. As for the junior

⁹² This literally means contact booklets, which are very common in primary schools in Taiwan. This kind of booklets serves as a medium of communication between a teacher and the parents --- both can write down their opinions and need to check the booklets each day by signing them off. The booklets are also reminders in which children can write down what needs to be done after school.

children, they were led to attend other programmes because the Space Theatre could not accommodate all the children at once.

The theatre is located opposite the main exhibition hall of the museum. It consists of a dome-shaped screen onto which is projected an image of the universe, showing how the planets and the stars move. Meanwhile, a talk is given by a museum educator to explain the movement of these planets as well as to give relevant information about astronomy. After the children had entered the theatre and were seated, the room became totally dark in order to imitate the night sky; the only light was the twinkling of stars projected on the screen. Shrouded in darkness, the children were too excited to remain quiet: a lot of whispering and chatting emerged at the beginning of the lesson. It took a while for them to adjust their sight and to concentrate on the talk.

The content of the talk was an introduction to the stars which are most commonly observed from the north sphere of the earth. Although the lesson seemed to be quite appealing to the children at the beginning, it was not long before the children were losing interest; they started talking to their friends in the dark. As a result, the educator had to stop talking several times in order to call for the children's attention. It is, however, very understandable why the children lost their concentration: the talk was very didactic, it lacked interaction between the educator and the audience, and even worse, it lasted for nearly fifty minutes. From the educator's viewpoint, this very instructive approach seemed to be a very effective way of teaching as long as the children were attentive to what he said. This inference was confirmed by his final remark to the children at the end of the lesson: "If you paid great attention to my talk, I can guarantee that you must have learned a lot in this lesson." Ironically, I really wondered how much the children had learned from this talk because even I nearly fell asleep once as I was comfortably seated and surrounded by darkness, conditioned air and most of all, a monotone voice.

After the lesson, all the children were grouped by class and prepared to enter the main exhibition hall to have guided tours. This activity would later be followed by lessons in the Classroom Theatre. Suddenly, they were all halted by museum staff at the entrance of the exhibition hall because the school had not yet paid their entrance fee. This had occurred because the school was poorly informed about the museum rules, one of which allows free admittance for schools to the main exhibition hall only on Wednesdays. However, the

school, having planned this visit for Friday, innocently assumed the visit was still free and thus asked the children only to pay their travel expenses. As a result, the children unfortunately could not enter the exhibition hall nor have guided tours as planned.

This once again illustrates the poor communication between the museum and the school as discussed earlier in this case study. Tan complained, after the visit, that the charging system is so inconsistent when all the different activities, and even different buildings, of the museum are considered. For example, a visit to the Space Theatre is free every day for school bookings but visiting the main exhibition hall requires a paid entrance fee every day apart from Wednesdays. When he planned the visit, he was unaware of these rules; he had assumed that all the educational activities were free for schools. He was upset because no one in the museum had drawn his attention to these rules. Otherwise, this accident could have been avoided.

Although both the museum and the school were responsible for this incident, it is also surprising to note that despite the museum visit being an annual event, the teachers in the school were unaware of this impending problem when they collected the fees for the trip. This may imply that most teachers either relied too heavily on the school to do the administrative work or, possibly, just held an indifferent attitude towards this activity and had no concern for what might happen.

Unable to visit the exhibition hall with tour guides, the children were still allowed to take lessons in the Classroom Theatre since they were free for schools. All classes were led separately to attend different lessons. There are eighteen Classroom Theatres in the museum offering various scientific lessons given by specialists. As its title suggests a Classroom Theatre is designed for the purpose of giving a lesson to a group of visitors. Its layout is quite similar to a lecture room, that is a square room with a platform in front of rows of seats. Although its size is smaller, only being able to contain about thirty people at a time, the room is well equipped with elaborate facilities such as video-recorders and slide projectors to create an audio-visual environment.

As arranged by the museum, Lin's class took a lesson which introduced the nearly extinct animals, turtle especially, to illustrate the importance of environmental protection. In principle, a lesson like this aims to be informative as well as entertaining. However, it

proceeded like a formal lecture: the educator, wearing a formal suit with a tie and holding a microphone, gave the talk on the stage while the children sat in rows in front of him and listened to him quietly (Plate 6.9, p. 215). From time to time, the children had to repeat words after the educator in order to remember the scientific terms. Although sometimes the educator would show slides and ask the children some questions, the general teaching approach was very instructive without physical interaction from the listeners. There were no objects or specimens used for demonstration and handling by the children.

The lesson lasted for about thirty minutes. Afterwards, the children had an extra free hour before lunch because of the unexpected cancellation of the guided tours. As the children were not allowed to visit the exhibition hall, some teachers decided to let the children play in the outdoor playground of the museum. As for teacher Lin, he and other colleagues took the children to the Science Centre, which was full of interactive exhibits and also free of charge for schools. Lin first divided the children into five groups and then set them free to explore the centre themselves. While the children were scattered over different floors of the building pursuing their interests, Lin sat in one corner of the ground floor, chatting with other teachers who were also taking a rest there. Before Lin started to chat to his colleagues, I could not help but ask him whether he would oversee or help the children play with the hands-on exhibits. Responding to my question, Lin stated that there was no need to help the children, as the purpose of these activities was to let children pursue what attracts them and play by themselves. Apart from this, he also thought that as a teacher, his responsibility was to the whole class. Hence, it was quite difficult for him to offer one-to-one based help to an individual child or a small group of children. He concluded that these kinds of interactive exhibits were more appropriate for families than school parties.

As many children were set free in the Science Centre by their teachers, the centre became an indoor playground. Many of them played around, chatting and also chasing each other. Others went to the gift shop and McDonald's situated in the centre. This chaos lasted for a long time until an announcement was broadcast requesting the children to behave themselves. However, its effect seemed to be limited. When the time was up, the children in the Science Centre were taken to the nearby outdoor park to have their lunch. The whole school was then assembled at 1:30 pm and moved on to Taichung Cultural Centre.

On arrival at Taichung Cultural Centre, a similar incident occurred again: their visit to the exhibition was rejected because they had not made a booking in advance. The staff of the centre insisted that pre-booking was necessary in order to prevent the exhibition from becoming overcrowded.

After some negotiations with the school, the staff of the centre finally agreed to let each class visit the exhibition for ten minutes in turn. Within the ten minute slot, a guide speedily toured the children around, giving a very brief introduction to a selection of exhibits. After they had hastily glanced over the objects, there was still plenty of time left before the coaches were scheduled to pick them up. In order to kill time, the children were taken to the park of the Art Museum of Taiwan Province, which is just next to Taichung Cultural Centre. Although the art museum was free to the public, none of the teachers took the children in. Instead, they let the children play outdoors while they were waiting for their coaches (Plate 6.10, p. 215). Lin explained that most teachers preferred to keep the children outside of the art museum because they were afraid that the children would damage valuable art works. At around 3:00pm the coaches took the children back to school. Having been out for the whole day, the children and teacher Lin looked exhausted. No review of the visit was made with the children and the school was dismissed immediately.

6.2.3.5 The Follow-Up Work and Comments

The next day Lin spent about thirty minutes discussing the previous day's visit with the children. It was a very open discussion of which, as described by Lin, the purpose was to "keep their impressions fresh", rather than reinforce the knowledge they had acquired. During the natural science class that followed, the specialist teacher did not say a word about the visit. She showed no interest in hearing about the children's visiting experience nor what they had learned during the trip. In fact, she admitted that she did not see the need for a discussion with the children because she had not gone on the visit.

When asked to express his opinions of the visit, Lin was very reserved about making comments on the incidents regarding the school being rejected to enter the museum's exhibition hall and Taichung Culture Centre due to the careless plan of the Office of Pedagogy. He said that he was unable to make any judgement on this as he was not involved in any preparation work and had no idea of what had been the cause. Instead, he

made some remarks about the respective programmes attended as follows:

“As most of the children hadn’t been to the Space Theatre before, I think their learning experience was consequently not very good. It is because they were more interested in the facilities than the talk, as it was the first time for them to be there. Even so, this opportunity had broadened their vision. They now know there is a place like this in Taichung. It also gives these children, growing up in cities, the chance to see such a beautiful night sky as they have never seen before. In this sense, I think this activity is good for them even though they may not learn a lot from it. As for the lesson in the Classroom Theatre, I think that the museum educator introduced very systematic and detailed information to allow the children to learn something in-depth from it.... They (children) were very curious about the hands-on exhibits in the Science Centre. Although many of the exhibits are dedicated to the subject of physics which does not relate to their current learning, at least the children have tried them.... On the whole, the children may not learn a lot in academic terms from this trip because they tend to have fun rather than gain knowledge whenever they are out of school. But I think this kind of visit is not all about acquiring knowledge, sometimes it is also very important in social terms.” (A/17)

As Lin’s comments clearly indicate, it is the social experience generated which makes the visit valuable even though the children’s learning seems not to be satisfactory. This reflects well the social attributes rather than the educational nature of the visit. In addition, it is important to highlight Lin’s remarks about the lesson taken in the Classroom Theatre. Lin seemed to be convinced that the children could learn something of substance because the educator gave very systematic and detailed information. It suggests that deep inside he was still preoccupied by the traditional teaching concepts which assume that children are like vessels which can be easily filled by well-organized and elaborate information.



Plate 6.5 The seat arrangement in Lin's class participating the experiment of small class teaching.



Plate 6.6 Children are taking an informal examination, which happens nearly everyday.



Plate 6.7 The example of a textbook containing elaborate text and illustrations.



Plate 6.8 School assembly before the museum visit.



**Plate 6.9 A lesson in the Classroom Theatre in the museum.
(A child stands up to answer the museum educator's question.)**



Plate 6.10 Children are playing outside the art museum (rather than being taken inside!).

6.3 Case Study 3

6.3.1 The Features of the School and the Teacher

The third participant school is located in a newly developed community in Taichung, famous for its well designed environment featuring green parks, clean streets, exquisite shops, and modern apartments. Several government offices are also situated here, one of which is just next to the school. The school is medium-sized and has seven classes for each year, with 35-37 students in each class. Their parents have a variety of occupations, but many of them are so-called ‘white collars’, working in government, offices, or schools, etc.

Chang is the youngest teacher participating in my study. She has only three years teaching experience. Unlike the majority of primary school teachers in Taiwan who normally graduate from teacher training colleges, Chang gained her teaching certificate after graduating from a university where she majored in English Literature. Now she is a homeroom teacher of a year 4 class consisting of 37 students aged 10-11 years. In addition, this case study involves another essential participant – teacher Tsai, who is the natural science teacher of Chang’s class and has actively participated in the process of the museum visit. It is, therefore, important to include his opinions in addition to Chang’s. Teacher Tsai graduated from a teacher training college and has seven years of teaching experience so far. Finally, the viewpoints of the teacher in charge of the school visits are included in this study. For this purpose, teacher Lee, a member of the Office of Pedagogy, is also interviewed.

6.3.2 The Teacher’s Views of Educational Visits in School Life

According to these participating teachers, the school is very cooperative with the local educational department in the implementation of educational policies. Therefore, it is frequently in charge of seminars and teaching demonstrations on behalf of the local authority. As far as outings are concerned, this school seems to encourage them in comparison with most others in Taiwan. This is mainly through the support of the school principal, who was once a volunteer tour guide in the National Museum of Natural Science. As a result, the principal tends to treat the museum visit as educationally worthwhile rather than just an annual routine. For example, he has required the specialist teachers of natural science to accompany the visit, and introduced museum worksheets to teachers in order to increase their awareness of this service.

Although the principal encourages outings openly, both Chang and Tsai feel that most teachers simply take his words as “official propaganda” instead of taking them seriously. As far as they know, outings are always organized by the school but never initiated by individual teachers. Besides, this school has no specified policy or practical support to help teachers to arrange outings themselves. In other words, in this school outings are ideologically approved and encouraged but in reality are never actively practised as they are supposed to be.

There are many practical difficulties when the concept of an outing is put into practice. The biggest one, Chang and Tsai unanimously point out, is the safety of the children. It is undoubtedly the first and biggest worry for most teachers in Taiwan. In addition, heavy workloads and tight teaching schedules are also reasons for their reluctance to participate in outing activities. Teacher Chang expresses her apprehensions about initiating outings by herself as follows:

“There was a period of time during which many accidents happened during school outings so now many teachers try to avoid taking children out. In addition, as a female teacher, I am more timid and very easily get nervous so that it’s impossible for me to take children out myself. If outings are organized by the school, the school will take the responsibility and solve problems if any accident happens.... The school holds a monthly exam for students. For these monthly examinations, we (teachers) must not only finish our teaching schedules, but also do extra preparation or tests for students to practice in advance. Frequent outings will certainly delay these plans so many teachers try to avoid them.”
(A/2)

As Chang’s remarks reveal, the practice of frequent examinations is a distinctive feature of Taiwanese schooling that undermines teachers’ enthusiasm for outings. In order to achieve the best exam results, teachers will do their best to prepare their students in advance through regular mock tests or revision lessons. Accordingly, many teachers often feel that there is never enough time for sufficient exam practice, even though they may have completed their school teaching schedule. Under such pressure, teachers inevitably think of outings as irrelevant to the exams and an extra burden for them.

The emphasis on exam results is a by-product of this prevailing exam culture. The practice in Chang's class is an eloquent example of this. The school is recommended by the local educational authority to discard the custom of ranking students' test results as a result of the Educational Reform. However, the adoption of this recommendation, as the school's policy, is up to individual teachers' decisions. Chang chooses to announce the students' ranking for two reasons. Firstly, it is expected by the majority of the students' parents. Secondly, she also believes that a certain amount of pressure will impel the children to study harder.

The practice of ranking is more than a method of pressurising the children to study. Sometimes it also serves as a resort for punishment. For example, if students are ranked lower than before, they have to accept a punishment such as having more homework or doing extra cleaning duty.⁹³ This rule is also applied to the casual tests which take place nearly every day. As observed in Chang's class, I was very surprised to find that during class recess, there were always several children who were forbidden to play but had to do duties in the classroom such as sweeping floors, cleaning windows and wiping the blackboard because they had done badly in their test results.

There are other strict rules exercised in Chang's class. The most impressive one is that the children are asked to close their eyes and mouths when waiting for their teachers' arrival at the beginning of each lesson. The purpose of this, as explained by Chang, is to resettle the children before a class starts. To implement this order, a class leader, assigned by Chang, patrols around the classroom and notes down the names of the children who break the rule. Apart from this, children who forget to bring things to the class, fail to finish their homework, or chat with others during the lesson also receive some punishments. Because of these stern rules, Chang's class is always quiet, disciplined, and very efficient in responding to teachers' instructions.

The reinforcement of these rules in daily practice is closely associated with Chang's perception of how children learn best. Discipline, as she emphasises, including punctuality, concentration and good manners, are the dominant elements of successful learning. Hence, as a teacher, she tries her best to help the children to form these habits. Because of her constant stress on good discipline, Chang admits that the atmosphere in her class is usually

⁹³ In most schools in Taiwan, students are assigned to clean their classrooms, toilets and part of the campus. Students and classes which do best in the cleaning duties will normally be awarded and modelled publicly.

very tense. A school day out therefore has refreshing implications; it suggests a great opportunity for relaxation beyond the walls of the classroom. Apparently, Chang holds opposing perceptions of outings and school learning, which are revealed in the following conversation:

Chang: "To me, a museum visit is like a fun day out in another form. It also lets the children have an opportunity to relax, away from taking lessons in the school. As a teacher, I can relax for a while, too. So I am excited about this coming visit because it is a chance for me to also have fun. I don't really care about the learning side of the visit...."

Interviewer: "What do you mean that you and the students can be more relaxed during outings? Can you explain more about this?"

Chang: "In a museum, the children are allowed to move freely and to chat with their friends as long as they don't disturb others. This behaviour is permitted in the museum but not in a classroom. A classroom is a closed space. As soon as they enter the room, the children know how to behave themselves.... I cannot stand noisy or loose discipline in the classroom. If the children are chatting with others or walking around without permission, they won't concentrate on their study. Besides, their behaviour will interfere with other students' learning. I am particularly concerned with children's concentration on their work. For example, if a lesson lasts for forty minutes, by my standards, I expect my students to be engrossed in the lesson for 38-39 minutes. Of course, it is very hard for the children of this age to do this. However, I will ask them not only to listen to teachers but also to take notes. In this way, I try to form a habit of concentration. So the children in my class are hardly relaxed while they are in school." (A/19)

Chang's comments reveal an interesting point which needs to be further discussed. Apparently, Chang perceives the nature of a museum visit as totally different to that of learning in the school. For her, a museum visit is like a fun day out because children are allowed to chat with friends, to walk around freely and even to play with exhibits or their peers. This behaviour may be in tune with the agenda of museums, but is totally against her principles of successful learning as defined in a school context.

Compared to Chang, Tsai puts a different emphasis on school visits. To him, a school visit, in spite of being irrelevant to his teaching, can however achieve collective moral and

cognitive goals which can not otherwise be attained by a family day out. To put it more clearly, Tsai makes a distinction between a school visit and a family day out, in that a visit with a family is an individual activity, but a school visit is a group action accompanied by rules and restrictions. He makes a comparison of these as follows:

"A school visit is different from a family visit. If children go out with their parents, their behaviour is hardly restricted by their parents because the parents would normally indulge their children's wishes. However, children cannot act as they wish with a school visit because a school is a corporate identity; a school visit has its agenda and rules which should be followed by all the children participating. Thus, the children cannot go somewhere or do something which is against the plan of the school." (A/9)

In addition to the group orientation, Tsai also displays a pivotal consideration of the group outcome as far as learning is concerned:

"In a school visit, the extent of what every child can learn from their teachers or tour guides is equal. For example, if a teacher or a guide teaches children knowledge of a subject, the children on average can learn at least thirty to fifty percent of knowledge from the teaching no matter what their levels are. But if children go out with their parents, the result of their learning is subject to their parents' knowledge. Some children may learn better because their parents know more; some children may learn very little because their parents know less." (A/10)

The collective attainment of children is particularly underlined in the above comments. Regardless of the children's individual learning capabilities, Tsai assumes that their learning outcomes will be equal as long as knowledge is imparted by the same teaching source. In a later interview, he points out factors which contribute to successful learning. They are, respectively, the teachers' teaching approaches, the influence of peers and finally the support of parents. These three elements can be counted as external forces imposing upon a learner. They are opposite to impetuses such as motivation, interest and inherent ability, which are all derived from the learner him/herself.

6.3.3 The Visit to the National Museum of Natural Science (NMNS)

6.3.3.1 The Background of the Visit

Without any exception this visit was conducted under the demands of the Education Department of Taichung City. From the school's standpoint, teacher Lee, who organised this visit, stated that the purpose of the visit was for schools to take the lead in an attempt to popularise museum visiting. Apart from homeroom teachers, specialist teachers of natural science were requested to join the visit too. Both teachers Chang and Tsai were briefly informed by the school about the agenda of the day, which included three activities – two lessons firstly in the Space Theatre and then in the Classroom Theatre, and a free visit led by an individual teacher at the end.

Coincidentally, both Chang and Tsai preferred to attend the educational services offered by the museum than lead a free tour by themselves. The lack of special knowledge presented in the museum was the main reason given by both of them. In Chang's case, although she thought that the visit was a fun day out and that the children should be granted the freedom to see what they liked, she still preferred organised programmes for the children. She explained her reasons as follows:

"From the position of a teacher, I would like to take the children to attend the museum programmes. But from the position of the children, they may like free visits so they can see things they like. (Interviewer: Why do you like to attend the museum programmes?) It's because I am not very familiar with the subject of natural science. If it is a historical subject, maybe I can teach the children something. But in this museum, I am afraid that I can't teach them or answer their questions because I don't know enough about the subject. Also, if you let the children tour freely around the museum, there is no difference from a family visit. Children can hardly learn anything from it---they may just look around without concentrating on learning." (A/26)

Chang's lack of confidence in teaching the subject of natural science was understandable because she had never taught this subject nor had relevant teaching training. However, teacher Tsai, who had ample experience of teaching this subject, had a similar problem. He also considered his expertise in the subject insufficient for teaching in the museum. As a result, he also preferred to use the museum services and regarded the guided tour as a

necessity.

As for his impression of the museum, Tsai thought that the museum was “like a lively encyclopaedia”, full of the latest equipment, detailed information and real objects. In addition, the museum was a very famous attraction frequently visited by him and his family. As far as he could recall, he had visited this museum, including the school visits, at least ten times. In opposition to Tsai’s frequent visits, Chang had merely visited this museum with the school. Although an occasional visitor, she still had a vivid impression, thinking that: “the museum is a better place than art galleries and cultural centres because it is interactive. You can not only look at displays but also play exhibits there.” Although Chang mentioned the interactive nature of the museum displays, her impression of the museum was in fact of a place more entertaining than educative, reflecting her previous description of a museum visit as a fun day out.

6.3.3.2 The Objectives of the Visit

Because the visit would be accompanied by the natural science teachers, Chang felt little responsibility for the children’s learning. She thought of her main tasks as assisting natural science teacher Tsai and ensuring the children’s safety. On the other hand, Tsai did not think that he should take complete responsibility for the children’s learning, either. Instead he assumed that a homeroom teacher, who would be in charge of his/her own class throughout the visit, should share the teaching, too. Although both teachers had different opinions regarding the issue of who should take the teaching responsibility, it had never been discussed between them. Tsai explained that raising this issue seems to be inappropriate for both homeroom and specialist teachers. Taking himself as an example, he did not deem himself to have the authority to tell other teachers what to do in their profession.

Although the question of who should take the teaching responsibility remained unsolved, Tsai did prepare a one page A-4 size worksheet for the children for the learning purpose. The content of this worksheet consisted of two parts. The first part had questions relating specifically to the lesson which would be given in the Space Theatre. As Tsai expected, these questions would make the children concentrate on listening to the talk given by the museum educator. The second part had open-ended questions such as “What exhibits interested you most? Why?”, which were intended to let the children express their experiences

freely and help them recall what they had seen during the visit. Apart from these learning-related questions, there was one question asking the children to note down the behaviour they felt proud of during the visit as well as the behaviour that needed to be improved in the future. This particular question indicates Tsai's concern with good manners and disciplines.

Although the content of the worksheet was irrelevant to Tsai's class teaching, the worksheets would be formally marked and be counted as a test afterwards. The intention behind this, as explained by Tsai, was to make the children take this visit seriously:

"The purpose of the worksheets is to make them feel like they are taking a test. If I mark them (worksheets), then they will be counted as results of a test. Last year I also marked the worksheets and the children became much more serious about the visit. So if the children are given worksheets, I believe that they will take the visit more seriously, rather than just having fun in the museum." (A/16)

In this case, the worksheets were used as a test mechanism, making the children more earnest about the museum visit. This again demonstrates that the prevailing culture of examinations not only played an important part in the school life but extended its power beyond the walls of the school.

6.3.3.3 The Preparation Before the Visit

As mentioned, although the school principal had encouraged the teachers to use museum worksheets, he left the teachers to decide for themselves what was necessary. Tsai thought that it was a good idea, but there was no consensus among the homeroom teachers of Grade 4 for buying museum worksheets. Therefore, Tsai designed a worksheet by himself, based on the museum worksheets, and adding some open-ended questions as mentioned earlier.

In the last lesson prior to the visit, Tsai spent about thirty minutes discussing the plans with the children. Apparently, the children had many questions in mind, which were more to do with the fun side of the visit, such as what clothes they should wear, whether they could go to the gift shop, and whether they could bring some sweets with them. At the end of the discussion, Tsai pretended to be serious, telling the children that they would have to complete

the worksheets during the visit and this task would be accounted as a formal test. All of a sudden, the students became quiet, alert, and attentive while Tsai briefed them on the content of the worksheets.

In contrast to Tsai, Chang had done very little preparation work, except dividing the children into groups and reminding them what to bring on the day before the visit. Chang was obviously less prepared for this visit. But ironically, she would be mainly in charge of the class throughout the whole visit, while the specialist teacher Tsai would be moving around, busy checking out other classes he taught during the visit.⁹⁴

6.3.3.4 The Visit to the NMNS

On the morning before the departure, Chang distributed the worksheets designed by Tsai to the children and reminded them to complete the sheets. Afterwards she wrote down three rules on the blackboard for the students to follow:

1. Pay attention to what you see and hear from the museum educator.
2. Do not touch any object which is not allowed to be touched.
3. Do not do anything dangerous and always stay with your group members.

At 8:10 am, seven classes of year 4 boarded coaches and headed for the museum. Each class was accompanied by its homeroom teacher. The children arrived thirty minutes earlier than the opening time of the museum. To kill time, Chang took the class for a walk in the museum park and then to the toilets. Even outside the school, the children displayed very impressive discipline as they followed Chang's orders precisely.

At 8:50 am all students of year 4 were summoned and prepared to attend their first activity—a lesson in the Space Theatre. The content of the lesson was about astronomy, and was no different from that described in the second case study. However, unlike the previous case where the lesson was interrupted several times by the noises made by the children, the talk carried on smoothly for 50 minutes without interruption because the students were quiet and better behaved.

⁹⁴ As a specialist teacher, Tsai teaches four classes of Grade 4.

After the lesson, the students were assembled for their next activity – lessons in the Classroom Theatre. Each class was led by its homeroom teacher to the appointed classroom. This transitional process was very efficient, rather different from the previous case studies which involved some unexpected incidents.

The lesson taken by Chang's class was about geology, introducing different types of rocks and soils on the earth. In addition to oral instruction, the museum educator used various equipment and approaches to explain this solid topic, including giving a demonstration, projecting slides and films, and playing a quiz (Plates 6.11 and 6.12, p. 229). Even more, real rocks were handled by the students. However, the educator just asked the children to pass around the rocks without telling them what to look for. It was insufficient as far as object teaching was concerned. Except for this defect, the lesson was generally dynamic and interactive in comparison to many others in the museum.

Normally, a session in the Classroom Theatre would last 30 minutes. Yet the lesson went on for nearly 45 minutes because the museum educator seemed to be too engrossed in teaching to notice the excess of time. Because of this, after the lesson, there was only 35 minutes left for a free visit before the return journey. Chang promptly gave an order and the students efficiently grouped themselves into five teams as had been pre-arranged in school. Wasting no time, the grouped children were immediately set free to explore the museum.

While the groups headed off in different directions, Chang and Tsai also explored the museum on their own. In this situation, I could only follow Chang, who is my primary study subject, but decided to interview Tsai later to supplement my data.

As observed, Chang strolled around a gallery for about 10 minutes. Although she met several students there, she did not approach or talk to any of them but looked around the exhibition herself. After a short while, she went straight to the gift shop. On her way to the shop, she encountered a group of her students. After learning Chang's intentions, this group followed Chang to the shop and stayed there with Chang for the rest of the time without visiting any other gallery. Apparently, Chang did not take any teaching role even though she had many opportunities to help the children learn in the museum during this period of time. She later explained that it was partly because she did not feel confident to teach a scientific subject. Also, she felt no need to approach the children since the purpose of a free visit was

for the children to explore the museum freely without her interference.

The interaction Tsai had with the children was no better than Chang's. As recalled in the later interview, although he intended to check around and offer help, Tsai had no chance to raise a discussion with the children nor had any control over their movements because they were obviously overwhelmed by the environment, briskly switching their attentions and directions. Added to this problem, he had a feeling of incompetence about teaching in the museum because, like Chang, he was not familiar with the subject. Therefore, he admitted that he made no efforts to teach the children but simply looked around the museum himself.

At 11:30 am, the children, who had earlier been scattered around the museum, punctually assembled in the main hall as they had been told to do. When the whole school was assembled, the children took their coaches back to the school. On the way back, Chang reminded the children to complete their worksheets, which would be collected as soon as they arrived at the school. As a result, many children were doing this work on the coach, comparing and discussing their answers.

6.3.3.5 The Follow-up Work and Comments

Wednesday is a half-day for primary school students in Taiwan. Hence, as soon as they arrived at the school, the children were ready to be dismissed. Before this, Chang collected the worksheets from the children, which would be handed to Tsai to be corrected next day, prior to a brief discussion with the children.

The content of the discussion was nothing to do with what they had seen or learned but about discipline in the museum. As each group had a group leader, Chang asked these leaders in turn if any member of their group had misbehaved during the visit. One of the leaders reported that one student did not stick to the group but played with the interactive exhibits himself. Having heard this, Chang reproached this child and asked him to do extra cleaning work the next day as a punishment for breaking her rules.

Chang's comments on this visit were very brief. As far as the children's learning was concerned, Chang made little comment but said that Tsai would know better than she did as he would be reviewing what the children had learned. For her, the major concern was the

safety of the children as well as their manners and discipline during the visit. In this respect, she was quite satisfied with the children's behaviour in general. Although she had few comments to make, she mentioned that the lesson taken in the Classroom Theatre might have achieved a very good learning result because the educator used various devices to present the lesson. In fact, she had learned a lot from it herself.

In the next natural science lesson, Tsai had a discussion with the children about various aspects of their visiting experience. First of all, he asked the children for their general feeling about this visit. Surprisingly, the children spoke in one voice: "very boring". This response seemed out of place with Tsai's expectation. He then asked the children to indicate how satisfied they were about the visit in order to get an overall appraisal of their feelings.

The result showed as follows:

Very Happy	Happy	Average	Not Happy	Very Unhappy
5	0	12	10	10
(number of students)				

Table 6.1 Students' feelings after the museum visit.

As the result showed, more than half of the class were not satisfied with the visit. The children were then asked to explain their reasons. One of the main reasons many children gave was the repetition of taking the same lesson in the Space Theatre – they had attended the same lesson last year. Therefore, they didn't have any fresh feelings about it. Worst of all, many children said that they were really wearied by the long talk given in the lessons. Another important reason was that the children preferred a free visit to taking lessons. It seems that two lessons within one morning in the museum, were too much for the children to take and had left too little time for them to see what they wanted.

Following this simple survey, Tsai then checked the children's answers on the worksheets. Apart from discussing the questions one by one, occasionally Tsai would review what the children had seen during the visit in an attempt to reinforce their experience. At the end of the discussion, Tsai randomly asked two children whether there was anything that had made them proud of themselves during the visit. One child said that he was very attentive to the talks given by the museum educators, the other said that he followed his group leader's words

precisely. Tsai then praised them in front of the other children.

After the lesson, Tsai made comments on the visit. First of all, with regard to the children's proposal for having more free time in the museum, he compared this with the teachers' viewpoint:

"Most of the children in the class today wish that they could have more free time during the visit. In fact, the arrangement of the visit last year had granted the children a lot of free time, but most teachers felt that the children ran around in the museum and made too much noise. Therefore, we made some changes this year on the schedule, having the children take one more lesson in the museum.... As a teacher, I should respect my students' opinions. However, I personally prefer to take the lessons or activities organized by the museum. (Interviewer: "Why?") It is because they (the lessons and activities) are professionally prepared so that we can absorb the information easily and quickly. At first, I thought that the children learn best this way. But today, I found after the discussion that this may not be true because the children felt the lessons were boring and lasted too long."

(A/45)

In spite of the children's negative opinions about this visit, Tsai still recognised that it was useful experience as far as learning was concerned. He commented that even though most children criticised the lesson given in the Space Theatre, they indeed had learned something from it because they could promptly answer the questions he had asked. As for the other lesson in the Classroom Theatre, though it lasted a little too long, Tsai gave the lesson as much praise as Chang did. He thought that the information given in this lesson was profound and very well organized. Most importantly, the lesson was interactive and was presented by various stimulating approaches. Finally, the use of the worksheets was also considered by him as a successful way of learning. Most of the children had diligently worked on their tasks, which definitely helped them to focus more on learning in an overwhelming environment, such as that of the museum.



Plate 6.11 A lesson in the Classroom Theatre in the museum.
(The museum educator directs children's attention to look at the slides behind them.)



Plate 6.12 A demonstration in the Classroom Theatre.

Conclusion

By comparing these three Taiwanese case studies, several patterns can be found as follows:

1. The main reason that these three Taiwanese teachers brought their class to the museum was because of the demands of their local educational authority. This meant that the teachers tended to regard the visits as social events, where the main purpose was to popularise museum visiting. As far as children's learning was concerned, they thought it was the museum's responsibility, and therefore, heavily relied on the museum's educational services.
2. Taiwanese teachers had very limited autonomy when deciding to conduct a school visit. Teachers were likely to encounter many difficulties, e.g. fixed teaching schedules, if they tried to initiate a visit. Therefore, a museum visit was usually organised by schools as a whole school activity, rather than as an action prompted by individual teachers.
3. Ideologically and structurally, Taiwanese schooling provided little support for museum visits. Teachers did not realise that museums were an ideal learning place, in comparison to schools where the recognised text-modelling approach, strict rules and frequent examinations were often practised. Because the visits were irrelevant to their classroom teaching, teachers felt no obligation to prepare themselves or the students for the visits.
4. The teachers did not have specific agendas for the visits but merely followed the schools' arrangements. Although the teachers did not have clear learning objectives for the children, they all thought that attending the museums' programmes was essential because children could thereby learn substantial subject knowledge in a systematic way. In addition, children were expected to pay closely attention to the museum educators' speech while they were attending the museum's services.
5. The teachers tended to evaluate the success of the children's learning by analysing the quality of the museum's educational programmes. For example, Hwang thought that her class had not learned much because she was not satisfied with the quality of the guided tour her class attended. On the other hand, Lin, Chang and the natural science teacher Tsai, thought that the visits were worthwhile because the children had gain fresh experiences and in-depth knowledge by attending the museum's programmes.

The patterns found in the Taiwanese case studies contrast with those found in the English case studies. In the next chapter, the differences among these patterns will be analysed in detail.

Furthermore, the findings of these case studies will be compared to those of previous studies of school visits to museums (cf. Chapter 3), and will be related to the broader schooling contexts of these two countries (cf. Chapter 2).

CHAPTER 7

COMPARISON AND DISCUSSION

Introduction

In Chapters 5 and 6 of this thesis, the individual teachers' agendas and museum experiences have been described and analysed as respective case studies. This chapter will identify patterns emerging from these case studies and, furthermore, seek to explain their similarities and differences by using the theoretical framework developed throughout the research process.

7.1 Summary of the Theoretical Framework

The key theories or hypotheses, which I assume have a direct influence on teachers' experiences of using museums, are summarised and discussed in Chapter 2. In brief, my starting point is the assumption that teachers in different schooling cultures have different ideas about teaching and learning, and consequently, have different perceptions and ways of using museums as an educational resource. This assumption is supported by the folk pedagogy proposed by cultural psychologists Olson and Bruner (1998), who suggest that people in different cultural contexts have different beliefs about learners and learning, and based on these beliefs, develop different teaching approaches. Similarly, Hein's (1998) educational theory explains that pedagogical approaches depend on how people think about knowledge and how they think learners can acquire it. In other words, if people have different ideas about learners and learning, they display different teaching behaviours.

Although teachers' perceptions of teaching and learning have the greatest impact on their teaching methods, Alexander (1995) and Galton (1997) also remind us that, in each schooling context, structures, such as the curriculum and the education system, may also condition teaching practice. In most cases, these educational structures and beliefs are inseparable;

they are the outward reflections of the ideological system of a particular country. However, in some cases, educational reforms may bring about rapid changes within the structures, and these may be based on ideas that contradict the long-established ideological framework of the educational system. In this case, ‘curriculum hybridisation’ may occur, which means that if these educational innovations are in conflict with teachers’ beliefs, they tend to simply bolt the innovations onto their existing practices.

These theories form a framework that can be used to examine current primary school practices in England and Taiwan, where teachers uphold traditional educational ideologies in the face of unprecedented changes brought about by recent educational reforms. Based on this theoretical framework, two case studies of English and Taiwanese primary schooling are examined in detail in Chapter 2. The argument developed in Chapter 2 will serve as an important template to compare and to interpret the findings of the case studies in Chapters 5 and 6.

Although the influence of primary schooling on teachers’ museum experiences is my main theoretical focus, the process of data collection reveals that museum cultures and the museum agendas also have an effect to some degree. Here, museum culture refers to the historical developments of museums in England and Taiwan, particularly the development of the relationship between museums and schools in their respective countries. The tradition of school visits to museums, as well as teachers’ previous museum experiences, will inevitably shape teachers’ current perceptions and usage of museums. Therefore, a case study of the relationship between museums and schools in each country is reviewed in Chapter 3.

In addition, a teacher’s museum experience is also inevitably influenced by the agendas of the museums (s)he chooses to visit. To clarify the term ‘museum agenda’, Moussouri has defined it as “a set of messages that the museum expects its visitors to attend and respond to, and the behaviours it expects them to adopt during the visit” (Moussouri, 1997: xiii). In this thesis, museum agenda particularly refers to the educational aims of the museum, its communicative approaches, and the educational programmes and services it provides for schools. Based on this proposition, case studies of the Natural History Museum, London, and the National Museum of Natural Science, Taichung, are conducted and analysed in Chapter 3.

In summary, the theoretical framework developed in this thesis is illustrated by the following Figure 7.1. It should be emphasised that the influence of schooling cultures on teachers' museum agendas and their experience of using museums will be the main focus of this thesis. However, in order to interpret these complex phenomena more thoroughly, the thesis also takes into consideration the variables of the museum culture and the museum agenda, to make the explanations of the cases more compelling and complete.

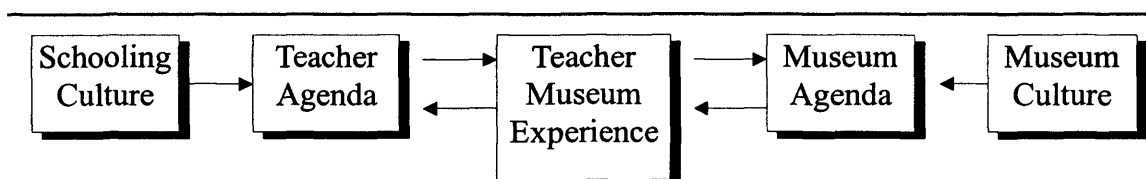


Figure 7.1. Influences on Teacher's Museum Experience

7.2. The Context of the Museum Visit

7.2.1 The Decision to Make a Museum Visit

In England, the decision to visit a museum is made by individual teachers, according to their own “professional judgement”.⁹⁵ In other words, English teachers have the autonomy to decide when, where and how to conduct a museum visit, as long as they can demonstrate that the visit is beneficial to the children. The autonomy teachers are granted reflects the characteristic of decentralisation in the English educational system (cf. 2.4.3, p 28). Before the ERA in 1988, English primary education was characterised as “a national system, locally administered”, which means that the state gave local education authorities the freedom to decide on the nature of the curriculum and the organisation of schools (Broadfoot et al., 1993: 25). By the same token, local authorities also granted schools a remarkable degree of autonomy to decide what and how to teach. Under this system, schools were individual units where teachers developed their own school ethos and teaching schemes. This system worked particularly well with the progressive education beliefs that were prevalent at the time. These beliefs advocated that teachers should tailor their teaching to meet individual learners' needs and interests, rather than following a fixed curriculum. Although this educational tradition has changed because of the ERA which, for the first time, placed a central control on the curriculum, English teachers still enjoy comparatively much more freedom than Taiwanese teachers in their practice in terms of planning their teaching schedules and creating

⁹⁵ Susan's words; see p.150

teaching materials.

Although the decision to visit a museum is made by individual teachers, the teachers are strongly supported in their decision, either by school policies, colleagues or headteachers, as seen in the three case studies in this thesis. There is a substantial amount of research demonstrating that educational visits are a vital and integral part of English primary schooling (cf. 3.4.2, p.74). Among the various options for school outings, museums which offer valuable first-hand experience are definitely a favourite choice for teachers. In England, the use of museums to facilitate children's learning is not a recent trend but is in fact a long-established tradition which can be traced back to the late 19th century when object-teaching was popular in schools. This tradition was continued throughout the 20th century and particularly thrived during the era of progressive education (cf. 3.4.1, p. 70-72).

Since the launch of the ERA, the tradition of taking students on such outings has not dwindled, but has been successfully maintained (cf. 3.4.2, p. 75). One of the reasons for its continued popularity, as suggested by Baxter (1997: 212), is that many English teachers continue to try their best to conduct as many outings as possible, despite the increased difficulties in organising them. The findings of this research strongly support this suggestion.

Another reason for this popularity is the encouragement provided by the National Curriculum (NC). As Mike, one of the participant teachers, pointed out, using museums to support class work is more than his personal passion – it is a recommended national policy. The NC does encourage teachers to use outside resources, including museums, and specifies how to link visits to its requirements, while museums are also given clear guidance on how to present their collections to meet the needs of school parties.

Compared to this long-established tradition in England, school visits to museums in Taiwan are a recent trend, which started with the launch of a nationwide cultural project in the late 1980s (cf. 3.5.1, p. 88). Despite the fact that visiting museums is becoming a popular leisure activity in Taiwan, most teachers do not have clear ideas of how museums can function as an educational resource, nor are they in the habit of using them for this purpose. This is in part due to the fact that the developing relationship between schools and museums is still at its early stages. In order to promote the educational use of museums, many local education authorities, under the supervision of the Ministry of Education, will require schools to visit

their local museums and galleries.⁹⁶ As seen in the three case studies, the schools local to the National Museum of Natural Science are required to organise a museum visit at least once a year, and to submit an official report detailing the date, the schedule of the visit and the number of students who participated, to the local education authority in Taichung. A similar situation is found in Su's study (1998: 156) of teachers in Taipei, which reveals that 63.1% of teachers who visit museums have done so in order to fulfil the official requirement. Based on these findings, it is fair to suggest that school visits to museums in Taiwan are, in most cases, carried out in response to an official request. Visits seldom result from the initiative of individual teachers as happens in England.

The organisation of museum visits clearly reflects a centralised educational system in Taiwan, which extends its control from the top of the Ministry of Education, through local education authorities, to individual schools (cf. 2.5.3, p. 42). This characteristic is also manifested in the way schools arrange a museum visit. As seen in the case studies, following a request from the education authorities, the Office of Pedagogy in a school organises the visit on behalf of the teachers, conducting all the preparatory work as well as planning the visit itinerary. The teachers have little opportunity to participate in this process: they are only informed about what is expected of them afterwards. Therefore, teachers normally have a passive attitude towards the visit, regarding it as an annual routine which needs to be implemented.

Teachers' passive attitudes towards museum visits may be made worse by their lack of understanding of how to use museums to facilitate their class teaching. Although the Taiwanese government does encourage school visits to museums by making them an official requirement, there is no guidance in the NC in Taiwan. This is in contrast to the case in England, where the NC specifies how to use museums to link to its requirements. Without clear guidance, and with only limited experience of outings, most schools and teachers do not know how to associate the experience of the museum visit with class teaching. Consequently, they tend to withdraw from their teaching responsibilities during the visit, regarding their primary duty to be merely that of introducing children to museums, so that they can come with their parents in their spare time. Taking Chen (Taiwanese Case Study 1) as an example, a teacher from the office of Pedagogy in charge of outings, he clearly stated

⁹⁶ All public museums and galleries are regarded as social educational institutions and are governed under the Ministry of Education. See also section 3.5.1, p. 88.

that from the standpoint of the school, the main purpose of the visit is to “popularise museum visits”; the children’s learning, on the other hand, is not the main concern on such a trip. The same attitude is also shared by Tan (Taiwanese Case Study 2) and Lee (Taiwanese Case Study 3), who also organise museum visits for schools.

Another possible explanation for the Taiwanese teachers’ greater emphasis on the social rather than the educational purposes of the visits may lie in the current museum culture in Taiwan. As discussed earlier, the educational use of museums in Taiwan is only a recent phenomenon, which is still developing. In this context, teachers may see their priority as just promoting the new trend of museum visits to children, before they can properly use museums for educational purposes.

By the same token, English teachers use museums not merely for educational but also for social reasons. Some English teachers perceive the purpose of a museum visit to be more than just fostering a new trend, as seen in Taiwan. They also see the visits as having a more progressive social mission, which is to break down the existing cultural barriers between museums and the more socially deprived classes. The attitude is closely associated with the prevailing museum culture in British society. British museums have been often criticised for creating cultural barriers which discourage the more socially deprived classes (Merriman, 1991) and ethnic minorities, from visiting them (Hooper-Greenhill, 1997a). This barrier is created, as Merriman (1991: 84-89) persuasively argues, by the deeply rooted image of museums within British society, which means that they are often associated with mustiness, elitism and scholarship. Some clues as to why these negative images exist can be found by examining the historical development of British museums. Chapter 3 of this thesis shows that, for centuries, the role of museums was to act as either conservators or educators. Visitors’ interests were, for a long time, neglected by museums until the 1980s when a new communicative approach started to be used (cf. 3.4.1, p.72). Because of this “historical burden of the image of the museum” (Merriman, 1991: 84) in Britain, people from disadvantaged backgrounds perceive museums to be either educational institutions which are only for intellectuals, or places for preserving the past, and therefore irrelevant to their lives or needs (p. 84-92). As a result, these social groups rarely or never come to museums.

This cultural barrier becomes evident in the early stages of children’s socialisation. Children from deprived backgrounds have fewer opportunities to visit museums on a family day out,

because their parents tend not to be in the habit of going to museums. This point is clearly demonstrated in Mike's case. Mike commented that museums in Britain are awfully underused and for many working class people, they have a snobbish image attached to them. As his students come from a more deprived area, he deliberately takes the children to museums in an attempt to provide them with a life-enriching experience. He also actively tries to introduce the parents to museums by inviting them to come on the visits with their children. In the case of visiting the Natural History Museum, it transpired that for many parents who came on the trip, it was the first time they had ever been there.

The findings from Mike's case are supported by Baxter (1997: 255), who suggests that "school visits can help to undermine the influence of such powerful obstacles as social class and economic disadvantages which can limit involvement." In his large-scale survey, Baxter (1997: 247) also concludes that one of the four reasons why teachers bring children to museums is to "bring children into contact with heritage sites, particularly where they would otherwise be excluded from such contact". In recent years, the issue of social inclusion has been prioritised to be the top of the government agenda. One requirement of the NC (p. 12) is to ensure that all children despite their social, cultural background, have the entitlement to take part in and benefit from the cultural heritages of the society. Under government funding, many museum projects from MGEP (Museums and Galleries Education Programme) have been launched since 1999 to achieve this objective (Clarke, et al., 2002: 31-34).

As demonstrated above, school visits to museums in both countries are carried out with more than just an educational purpose in mind. They also play an important social role, which is closely related to the museum culture within that society. Consequently, this aspect is addressed in the research alongside the factor of schooling, in order to portray a broader and more complete context of school visits to museums.

7.2.2 Considerations When Conducting a Museum Visit

Because of the different educational structures in England and Taiwan, their teachers have to take different considerations into account when they plan a museum visit. In England, the ERA has had a profound effect on many aspects of school life, including visits to museums. It is clear that pressure from the NC and league tables has increased the difficulties experienced by teachers when they try to undertake these visits. It seems, however, that

teachers have tried hard to overcome these difficulties in order to maintain the number of visits. As discussed earlier, studies have consistently found that the number of educational visits has not decreased as a result of this pressure. This tendency is confirmed by this research, where the three participant teachers still carried out as many museum visits as possible, despite the increasing pressure they faced in their work.

Although pressure from the NC has not restricted the number of school visits, it has, however, changed the nature of these visits to a great extent. A significant pattern has been clearly identified by many studies: teachers now have much more focused educational objectives for their visits, which relate to the criteria specified by the NC (cf. 3.4.2, p. 76). In other words, while upholding their belief in the educational value of museum visits in general terms, teachers now have to justify their beliefs by carefully linking the objectives of the visit to the NC. This pattern is consistent with the findings of the three case studies in this thesis. For example, Susan claimed that the main factor which now influences her decision to undertake a museum visit, is whether the visit fits the criteria of the NC, in order to reinforce the subject knowledge taught in the classroom. As for the other participant teachers, Rita and Mike, they did not plan their visits too rigidly in order to fit the statutory requirements, but the objectives of their visits were closely related to their classroom teaching and they had clear learning objectives for the children.

Another impact of the ERA is on the cost of the visit. The introduction of the LMS in 1988 has already affected many schools' decisions with regard to conducting museum visits. The recent policy Fair Funding has further caused more obstacles for schools in deprived areas, making it difficult to finance museum visits. Previous studies have claimed that the cost, either for a museum's educational services or for transportation, is definitely an important concern for teachers conducting a museum visit (cf. 3.4.2, p. 75). However, the impact of this factor may be subject to the financial situation of individual schools, as well as the museums teachers choose to visit. For example, although the three participant teachers all mentioned their concern about the cost, they did not feel it was an insurmountable problem. In the cases of Rita and Susan, whose schools are located in more affluent areas, the children have very supportive parents who contribute to the cost of the visits. In Mike's case, despite the fact that his school is located in a poorer area, the school's policy is to encourage educational visits, so the children are still able to go on some outings because they are subsidised by school funds. Even when visits are not funded by the school, Mike said that

he can still go to museums which are free of charge. He further commented that, fortunately for him and the children, there are many wonderful museums in London, like the Natural History Museum and the British Museum, which give schools free admission. These findings are consistent with those of Adams' study (1990: 12), which stated that "most schools said that the new entrance charges have not caused them to cancel a visit, but many said that museums that charge are eliminated in advance."

Another important consideration for teachers is the safety of children, especially those at primary school age. For this reason, English teachers will usually invite parents to come on the visits to look after the children. Getting parental help on school trips does not normally present a problem for English teachers. It is fairly common for parents to get involved in extracurricular activities in England, as demonstrated in Broadfoot's study (Broadfoot et al., 1993: 59-60) and as observed in this research. Some schools have even developed policies of actively encouraging parental involvement in such visits (School Curriculum and Assessment Authority, 1996: 4). A good example is Susan's school, where this policy is explicitly stated in the school prospectus. Although getting sufficient parental help is generally not an issue for English teachers, in some cases, Rita's for example, it can still cause a considerable problem. Rita stated that the main obstacle for her when she is arranging an outing is neither pressure from the NC nor the cost of the visit, but obtaining a sufficient number of adults to accompany the children. This is because she carries out outings nearly every week, and thus needs a relatively large amount of assistance. If she cannot find enough adult help, she has to cancel the visit. To solve this problem, she not only looks for help from parents, but also welcomes voluntary assistance from students at local colleges.

In comparison, concern for the children's safety seems to have a strongly negative effect on teachers' willingness to conduct museum visits in Taiwan. When the Taiwanese teachers were asked about the possibility of initiating a museum visit by themselves and conducting the visit alone, they all gave a similar answer: this proposal would be neither approved by the schools nor endorsed by the teachers themselves. All the participant teachers stated that a museum visit is always organised as a whole school activity and never conducted by individual teachers. This is even the case in Lin's school, which is participating in the scheme of experimental teaching, and has a stated policy of encouraging teachers to "utilise educational resources outside the school to assist the classroom teaching." (cf. p. 199)

The most significant cause of this behaviour is concern for the children's safety. The reasons for this concern are two-fold. Firstly, Taiwanese teachers do not feel confident about handling any potential accidents that may happen during the trip, due to their lack of outing experience. Secondly, unlike the situation in England, it is not common in Taiwan for parents or other voluntary helpers to be invited to come on school trips; such an idea has never crossed the minds of many teachers before. Teachers' attitudes towards the involvement of parents in educational activities clearly reflect their perceptions of the teaching profession, which will be discussed in detail later (cf. 7.4.2). On a visit to a museum, a homeroom teacher would normally have to look after an entire class of thirty or more students, for the whole day, without any adult help. Not surprisingly, such a responsibility is very intimidating for most teachers. Therefore, both schools and teachers prefer outings to be organised and conducted uniformly by the whole school. By doing this, schools can carefully monitor every stage of the visit, while teachers can let schools assume all the responsibility if an unfortunate accident happens.

Apart from the children's safety, another essential factor, which undermines teachers' willingness to undertake a museum visit, is the concern that the visit will interfere with progress in their classroom teaching. In Taiwan, teachers' timetables are uniformly scheduled by their schools, based on the statutory descriptions of the NC. This not only specifies the content that should be covered for each subject, but also extends to a detailed schedule indicating the number of hours that should be spent teaching each subject (cf. 2.5.3. p. 45). In comparison, although teachers in England also have to implement the NC and meet legal requirements such as the statutory hours for teaching English and Mathematics, they have comparatively more autonomy when planning their classes. The purpose of imposing a standardized scheme of teaching as seen in Taiwan, is to ensure that students in the same year group progress at the same rate. In order to reinforce this collective goal, schools also hold regular examinations each term to evaluate the children's learning. Under this system, teachers not only have to rigorously follow the teaching schedule but also need to repeatedly revise what has been taught, in order to prepare students well for examinations. This is why many participant teachers expressed their great concern that a museum visit, which is normally irrelevant to their classroom teaching, and which also means that the children need to miss some lessons, may interfere with their tight teaching schedule and consequently, affect the children's test results.

In addition to the fixed teaching schedule, another factor which causes problems for teachers when they are organising outings is the system of specialist teachers in Taiwan. Unlike the English system, in which primary teachers are responsible for all curriculum subjects, in Taiwan the curriculum subjects from the third to the sixth Grades are taught by homeroom teachers and specialist teachers.⁹⁷ Therefore, it is quite possible for students from the third to the sixth Grades to have been taught by several different teachers in one day. If a teacher, either a homeroom or specialist teacher, wants to conduct a museum visit, they have to negotiate with the other teachers to reschedule their lessons, in order to make a whole day completely free for the visit. Some teachers may consider this to be extremely problematic, not only for him/herself but also for the other teachers involved, especially as their teaching schedule is normally fixed and difficult to rearrange. Although this issue did not arise in the case studies, as the visits were arranged by the schools not by the teachers, many of the participant teachers predicted that it would be a problem if they tried to initiate a visit themselves.

As seen in this section, in their different schooling contexts, English and Taiwanese teachers come to museums for different reasons, and encounter different practical issues. The discussion here focuses on the context of the museum visit, particularly the external factors such as educational tradition, policy or structures, which may help or hinder teachers who wish to conduct a visit. The next section will discuss the internal factors involved in how teachers perceive and value the museum visit, which not only influence their willingness to go on a visit, but also directly affect their visit agenda and their use of the museum.

7.3 Teachers' Attitudes Towards the Museum Visit

The overwhelming finding from this research is the significant extent to which the teachers' values and ideas regarding a museum visit are conditioned by the entrenched educational ideologies. In Chapter 2, the educational ideologies of English and Taiwanese primary schooling have been discussed respectively. As ideas of teaching and learning are so different in England and Taiwan, they have led to divergent attitudes towards the use of museums among English and Taiwanese teachers, as discussed next.

⁹⁷ Subjects taught by specialist teachers include Natural Science, Physical Education, Music and Art. Homeroom teachers deal with the rest of the curriculum subjects, as well as taking care of daily activities, discipline, mentoring and counselling issues.

7.3.1 Learning from Experience vs. Learning from Modelling

It is a prevalent belief in England that children learn from experience. This view is driven by the deep-rooted belief that children are unique individuals who develop as organic beings, or grow like plants, to use a metaphor, by responding to their environments and experiencing the world around them. As English teachers assume that children learn from experience, increasing children's direct and first-hand experience becomes their overriding educational concern. This aim is not only achieved by creating material-rich environments and offering physically engaging activities as observed in the schools in this research, it is also fulfilled by bringing the children into contact with the outside world. Therefore, outings are highly regarded for their educational value.

Among the various places available for visits, museums are definitely the first choice for teachers as far as the provision of active learning opportunities is concerned. The three participant teachers all pointed out that their main reasons for conducting a museum visit are to give the children the chance to see real objects or take part in physical activities in the museums. The teachers all felt that first-hand experience is essential and invaluable to the children's learning, as it not only reinforces their memory of what they have seen or done, but also enables them to understand abstract concepts in a concrete context. Such an experience, as the teachers firmly stated, cannot be substituted with other ways of learning such as reading books, listening to teachers, or watching videos. This shared attitude is consistent with the findings of the OFSTED study (1993: 8) which reveals a powerful conviction among English teachers that 'learning by doing' is more effective than 'teaching by telling'.

The great concern among English teachers' for giving children first-hand experiences seems to be even more crucial in today's social context. As Susan pertinently points out, children are now living in a multi-media world and so are exposed to a range of different stimuli; therefore it is hard for them to take things in by simply listening to teachers or reading books. They need to see, touch, hold and smell things to form a concrete experience which will eventually stick in their minds. The issue raised by Susan not only illustrates her personal belief in learning through sensory exploration, but also indicates the challenge most teachers are now facing in competing with modern media for the children's attention, in order to give them practical experiences.

In contrast to the English educational belief in first-hand experience, traditional Chinese pedagogy stresses the value of learning from modelling, based on the assumption that children are like clay which can be modelled by external forces. One of the most distinctive manifestations of this belief is the extensive use of textbooks in Chinese society. In particular, primary schools in Taiwan use textbooks for nearly every subject, including art, music and physical education. Textbooks, which present knowledge in a systematic order, with elaborate texts and illustrations, have always been regarded as the ideal models for children to learn from. In addition, textbooks are also the best way for parents to monitor what teachers have taught in class, as well as for children to practise what they have learned after school. Therefore, the textbook is more than a display of knowledge: it is an essential means of connecting learning in and outside schools.

Because textbooks have always been regarded as a key mechanism of the educational process, the Taiwanese government used to exert its centralised control over these publications. In 1996, as one act of the ER, the government eventually approved some private publications to replace standard textbooks (cf. 2.5.3, p. 45). One of the purposes of this privatisation was to discourage students from rote-learning the contents of uniform textbooks. However, this intention has not been well received in reality. It is reported that the privatisation of textbooks has become a 'nightmare' for high school students because they have to read several versions of textbooks produced by different publishers in order to prepare for examinations to enter universities.⁹⁸ This incident not only demonstrates the continuing culture of using textbooks in Taiwan, but also points to the fact that a prevailing habit is hard to change overnight despite the reforms in the educational structure.

As textbooks are still highly regarded and widely used by teachers, other educational resources, museums for example, are inevitably treated as dispensable or less significant. This attitude is explicitly expressed by one teacher Tan, who frankly admitted that the main purpose of a museum visit is to provide a rich social experience for the children. As for other purposes, such as the facilitation of class teaching, it is not a major concern for the school because "teachers already have textbooks and equipment to teach the lessons, so it's not necessary for them to go on a visit for the purpose of teaching."⁹⁹ Another teacher Hwang, pointed out that the heavy dependence on textbooks often results in teachers'

⁹⁸ The source is available at <http://www.cts.com.tw> (accessed 12th, December, 2001)

⁹⁹ See p. 201

reluctance to expand their teaching resources beyond these books, let alone use museums outside schools. As museums are not recognised as necessary for teaching lessons, some teachers, she further commented, may even regard a museum visit as an extra burden in their heavy workload.

7.3.2 Self-motivation and Enjoyment vs. Discipline and Hard Work

English educational beliefs assume that children are unique individuals who develop through experiencing the world physically and mentally. In other words, learning is believed to be a process of personal development, which is mainly dependent on the children themselves. Therefore, for English teachers, another pedagogical concern is trying to motivate children to actively explore and interact with their surroundings. Cortazzi's study (1991: 124) shows that English primary school teachers believe that the children's interest and enjoyment play a key role in the planning of their work. In Planel's (1997: 363-364) comparative study of English and French primary schooling, it was also found that more English teachers put emphasis on the importance of intrinsic motivation in children's learning, and more English pupils expected their work to contain elements of fun or enjoyment.

The value of the affective side of learning is clearly shared by all three English teachers in this research. Both Rita and Mike strongly claimed that motivation is the key ingredient to successful learning and underpins their teaching plan. Susan, who teaches in a Roman Catholic school and has a more formal teaching style, also stated that it is fantastic if teachers can combine education with entertainment. The teachers' belief in self-motivation is evident in the way they decorate their classrooms. Displays are enthusiastically set up and frequently changed in order to create a vibrant and cheerful atmosphere, engaging the children's attention and increasing their interest. Moreover, teaching is rarely practised by preaching the contents of textbooks, but more often by involving the children in various activities and using a range of resources. In such an educational climate, it is not surprising to find that all three teachers claimed that igniting the children's interest in learning is another reason behind their museum visits, which are full of fresh and exciting stimuli for children.

In comparison, Taiwanese teachers have a completely different viewpoint with regard to the core of successful learning. According to Chinese beliefs, children are malleable and can be formed by external forces or by their environments. Thus, teachers try to form an orderly

and disciplined learning environment in which children can develop good learning habits. The formation of these learning habits, such as self-discipline, not only helps children to concentrate on teachers' instructions in schools, but also enables them to effectively practise what they have learned after school. In order to form certain habits, the well-known features of Chinese schooling such as strict rules, fixed schedules and repetitive routines, are widely exercised. The notion of 'school is a place for learning, not for fun' is instilled in children at an early age (Wu, 1996: 13). Cortazzi and Jin's study also shows that 43% of Chinese students expect a good student to be 'hard-working', in comparison to only 6.6% of them who expect such a student to be 'well-motivated' (Cortazzi and Jin, 1996: 189).

The traditional ideas about how a child should behave and what makes an ideal learning environment inevitably affect teachers' attitudes towards museum visits. The best example to illustrate this point is the case of teacher Chang. As a young teacher in her late twenties with only three years of teaching experience, she, nevertheless, firmly upholds the traditional ideas about learning. As observed in her class, Chang deliberately cultivated good learning habits, such as concentration and diligence, by imposing strict orders and rules on her students in the classroom. In contrast to the strict and tense atmosphere in her classroom, she thought that a museum visit is more like a fun day out. This kind of learning, allowing children to explore and play in a relaxed, entertaining environment, is in complete contrast to her firmly-held beliefs about effective learning environments.

Chang's reaction to informal styles of learning is not unique. Liou's study (1997: 42) found that some Taiwanese teachers interviewed expressed doubts about how much children can actually learn from a museum visit, as in this new and exciting environment children appear to be noisy and to have loose discipline. Howard's study (1990: 68) also shows that Chinese teachers and students tend to regard interactive activities such as stimulating conversations and role-playing, as 'games' rather than 'serious learning'. Based on these findings, it is fair to suggest that learning through playing, which many museums now try to encourage, is neither taken seriously nor appreciated by Taiwanese teachers. It may be another explanation for Taiwanese teachers having less concern for the educational aspects of museum visits.

7.3.3 Individualism vs. Collectivism

As English teachers regard learning as a process of personal development mainly dependent on children themselves, they pay more heed to individual needs, as well as to promoting the skills of self-directed learning. Planel's study (1997: 357) found that, in comparison to French teachers, English teachers tend to encourage children to find their own individual solutions to problems, because teachers believe that "everyone's idea will be different". Individualism is often described as a typical feature of English primary schooling, which is not only reflected in the decentralised English education system as discussed earlier, but also manifests itself in the approaches used in teaching students. Although this trait of individualism may have been weakened by the recent trend of whole-class teaching, which was a result of the Education Reform Act. However, according to Galton's survey of several important studies over a period of 20 years,¹⁰⁰ teachers' interaction with individual children was then and is now a dominant pattern of teaching in English primary schools (Galton et al., 1999: 57).

Examples of this interaction were often seen in the three participant teachers' classes, too. For example, the children were given opportunities to work alone and to choose how to do a task. To facilitate individual learning, all three classrooms had an open layout, a flexible seating arrangement, and an abundance of learning materials and equipment. Such a classroom design allowed the children to have more freedom in terms of moving around to get necessary equipment, talking with classmates or asking teachers for help. While the children were working alone, the teachers were either walking around to check their progress or interacting with individual children who queued up for help or comments.

Efforts to increase children's independent learning skills are not limited to inside the classroom, but also extend outside the school. Frequent outings, as seen in these case studies, are an important way of introducing children to a wide range of resources as well as training them to discover answers in a new environment. Museums, which present valuable information in various forms, such as objects, texts, figures, pictures and videos, are one of the teachers' favourite choices of environment for encouraging this type of learning. All three teachers emphasised that the fostering of the children's independent learning skills, such

¹⁰⁰ The studies included in Galton's survey are ORACLE (Galton and Simon; 1980), PRISMS (Galton and Patrick, 1990), One in Five (Cross and Moses, 1985), School Matters (Mortimore et al., 1988), INCSS (Galton et al., 1998), PACE (Pollard et al., 1994; Croll, 1996).

as knowing how to use museums, raising questions of their own, and a desire to find out information by themselves, is another impetus for their museum visits.

Apart from the educational benefits, visiting museums is also seen as a good way of enriching children's lives and broadening their horizons, in other words, of developing a child socially. Although the Taiwanese teachers also acknowledged the value of the social experience generated by a museum visit, it seems that the English teachers took this aspect more seriously and even regarded it as an indispensable duty of school education. For example, Mike deliberately brought children out of the classroom in order for them to experience things that they would not normally experience in their daily life. He firmly believes that school education has a more important function than just distributing knowledge. As for the other teachers, Rita and Susan, they claimed that opportunities to enhance the children's experience, whether by organising visits or inviting outside guests to take workshops or give talks, are greatly encouraged by schools despite the financial considerations.

The great concern English teachers have for the children's social development is confirmed by the findings of both Planel's and Broadfoot's studies, which suggest that in comparison with French teachers, English teachers have a broader definition of their professional responsibility. English teachers tried to develop the child as a whole--- socially, personally and academically, whereas French teachers often regarded their duty to be only that helping the children to achieve their academic potential (Broadfoot et al., 1987; Planel, 1997).

In contrast, rather than maximising individual potential, the ultimate goal of Taiwanese schooling is to reduce the differences between individuals, in order to achieve a collective congruence both educationally and socially. Educationally, the Chinese believe that although children may have different abilities and aptitudes, through diligent practice and training, everyone can achieve the same goal. Socially, schools are assumed to be a mechanism for maintaining social stability: therefore, their duty is to groom children so that they can integrate well into group life. In this context, the paramount responsibility of schools is not to cater for individual differences, but to set up a common goal, and then ensure both teachers and students work hard towards this goal by imposing standard rules, uniform teaching targets, identical learning environments, and recurrent school inspections and examinations.

Examinations have been the most prevalent means of monitoring the success of the collective goals of learning in Chinese society. In particular, Taiwanese schools are well known for holding an excessive number of examinations, a phenomenon which has been described as 'exam hell' by foreign visitors (Sharma, 1997a). Although the ER in Taiwan has tried to modify this intensive exam culture by encouraging primary school teachers to use multiple assessments in place of written tests, examinations, either formal or informal, are still a major feature of school life as well as the main mechanism of assessing children's learning by the participant teachers, as seen in the case studies.¹⁰¹

Such an exam culture seems difficult to adjust, especially when it is enthusiastically fostered by Chinese parents' zealous interest in academic achievements. Parents in Taiwan, as teacher Hwang pointed out, are too keen on children's test results to value other types of learning which cannot be examined. In Taiwan, primary schools used to have formal examinations every month. Since the ER, many schools are still regularly holding examinations two or three times each semester.¹⁰² For each exam, parents are informed about their children's results as well as the average scores of the whole class. By comparing these two sets of exam results, parents can easily assess their children as well as the teachers. Therefore, Taiwanese teachers are under tremendous pressure to produce good test results to satisfy parents. This is another reason for teachers' reluctance to conduct museum visits, because the visit is normally irrelevant to classroom teaching, and its learning outcomes cannot be formally assessed.

It is interesting to point out that, in comparison, although English primary school teachers are also facing tremendous pressure from Standard Assessment Tests and the announcement of league tables, the English participant teachers did not relate this pressure directly to the demands of parents. Conversely, all the main participant teachers in Taiwan expressed their serious concern about criticism from parents in their profession. This concern may be explained by the suggestion made by both the studies of Chen and Uttal (1988) and Stevenson and Stigler (1992), that Chinese parents have much higher expectations of teachers, compared

¹⁰¹ According to the interview data, all the participant teachers marking children's learning outcomes were based on the following proportions: 50% are the results of formal examinations held regularly by schools, and 50% come from multiple assessments, including informal tests, homework and class work, which are subject to the teachers' own marking.

¹⁰² In Taiwan, a school year is divided into two semesters. A first semester covers the period from September of the current year to January of the next year, and the second semester, from February to July of the next year. Before the ER, primary schools normally held formal examinations every month. Now examinations in schools have been reduced to two or three times a semester.

to their western counterparts: teachers therefore have to work hard to meet parents' demands. This phenomenon may be particularly evident in the current educational climate in Taiwan, where parents are empowered to voice their opinions about education. As a result, Taiwanese teachers are becoming even more aware of parental criticism.

Because parents and teachers in Taiwan place a strong emphasis on the collective academic outcome, both parties have a more restricted view of the educational responsibility of schools: the primary goal of school education, as far as learning is concerned, is to maximize children's academic potential, as well as the collective test results of the whole class. Learning in museums, which is more individual and affective-oriented, is often regarded as the parents' rather than the schools' responsibility. This is another reason why the schools and the participant teachers tend to see their role during a museum visit as merely one of introducing children to this educational resource: they expect parents to bring their children to museums for their own benefit. This finding is also supported by Liou's study (1997: 46) finding that teachers have high expectations that parents should play a more active role than schools in taking children to museums for learning purposes.

Interestingly, this research did find one exception to the common attitude mentioned above. One of the participant teachers, Tsai (Taiwanese Case Study 3) thought that schools should share the responsibility of visiting museums with parents. The reason behind this, as he explained, is that a school can ensure every child has an equal educational input during a visit because children attend the same programmes and follow the same instructions. On the other hand, during a family day out, what a child can learn is varied and mainly depends on his/her parent's level of knowledge.

Although Tsai holds a different opinion regarding the issue of who should be responsible for using museums to facilitate children's learning, the educational mission underpinning his reasoning is actually not too different from that of most Taiwanese teachers, which is the pursuit of a collective learning outcome. His emphasis on this aspect also extends to his expectations of children's behaviour in museums. For example, Tsai thought that a school visit is a good opportunity for children to learn how to follow the group agenda and rules, and to learn how to restrain their personal will if necessary. His opinion clearly reflects the social mission of Taiwanese schooling, which is to induct children into group life and teach them to conform to collective norms. In comparison, although English teachers also have

concerns regarding children's social behaviour in museums, their emphasis is more on developing children as sound individuals. For example, Susan expected the children to become more confident and independent through being exposed to new environments like museums, and by being shown how to behave in public.

In summary, the discussion in this section presents a comparison of English and Taiwanese educational ideologies, and how these ideas profoundly affect the values teachers place on a museum visit in specific ways. Compared to the tangible educational structures, teachers' values, though implicit, also have a determining influence on how they decide to conduct a visit and how to use the museum as a resource. In other words, both educational structures and teachers' rooted beliefs have an impact on the planning of agendas and decisions about objectives for the visit. The next section will continue to examine how the combined influences of educational structures and teachers' ideas affect the teachers' expectations and plans for museum visits.

7.4 Teacher's Agenda for the Museum Visit

7.4.1 Expectations of the Museum Visit

Galton (1997: 110) has reminded us that teaching is a 'pragmatic activity', meaning that when teachers put their ideas into practice, they have to tailor their internal beliefs to meet external conditions imposed by educational structures (cf. 2.3, p. 18). This was evident in the case of the English teachers, when they planned their objectives for the museum visits. As discussed in the previous section, the main impulse for the English teachers to undertake museum visits comes from their belief in the educational value of such outings. This finding is well supported by the study of the SCAA¹⁰³ (1996: 7), which clearly indicates that teachers' perceptions of the value of these visits are the overriding factor in determining whether a visit will be made. Having said that, when the English teachers plan their visits, they have to carefully take the requirements of the NC into consideration.

As shown in the three case studies, the museum visits were all closely linked to classroom teaching and had clear learning objectives. The most evident learning objective was to support the subject taught in the classroom. This purpose was explicitly stated by the

¹⁰³ School Curriculum and Assessment Authority.

participant teachers. It was also manifested in what the teachers expected the children to see and do in the museum. In the cases of Rita and Susan, the main galleries they were planning to visit were directly related to the science subjects taught in the class. The children were assigned the task of completing worksheets, which were specially prepared by the teachers based on what the children had already learned in school. Susan admitted that the visit was very knowledge-based and the purpose of the children completing worksheets was to help them get used to the format of written examinations. As for another teacher Mike, although he preferred to let the children explore the museum rather than giving them any task to do, the purpose of the visit was not random; it was also to support the science subject taught in class. Therefore, on the day before the visit, he carefully reminded the children of the learning purpose of the approaching trip, highlighting the specific galleries they needed to visit, and asked the children to pay special attention to certain kinds of exhibit such as bones and skeletons, which were related to the science subject taught in the class.

It is important to note that, despite the increasing focus on teaching single subjects, the English teachers still tried to incorporate other curriculum areas into single-subject teaching. For example, Rita gave children a drawing task during the visit, a way of linking the subjects of Art and Science. Mike also expected the children to develop their language skills by learning specific vocabularies while reading labels, or by constructing correct sentences while having conversations or asking questions. This tendency is consistent with the findings of other studies, indicating that many English teachers prefer to use an integrated approach to the use of museum resources; in particular, art activities and language training are often used for linking different curriculum subjects (cf. 3.4.2, p. 77). In comparison to the more restricted learning on a single subject, the purpose of cross-curriculum links is to expand children's learning experience and stimulate their interest.

Although the fulfilment of the NC was the most evident objective of the visits, it was not the sole purpose; there were other important aims the teachers wished to achieve. These aims clearly reflected the teachers' educational beliefs, which had prompted them to organise the visits in the first place. For example, the teachers all expected the children to look closely at the exhibits in the museum in order to gain first-hand experience. Taking Rita as an example, apart from asking the children to draw, she encouraged them to spend a considerable amount of time in front of each exhibit, skilfully directing their attention to examining the objects from different angles, and to notice attributes such as colour, size, and texture.

Another important objective of the visit was for the teachers to develop the children's independent learning skills. To achieve this goal, the children in Rita's and Susan's classes were not expected to just passively listen to the teachers. Instead, the children were given worksheets and were expected to do activities, as Susan explained: "they have to find answers themselves, they have to think for themselves, they have to know where they are going, they have to be able to read information, and interpret information correctly to be able to answer the questions." Mike used a more liberal approach to encourage the children to learn independently: he did not require the children to do any tasks, but gave them sufficient freedom to explore the museum by themselves. His intention was to enable them to follow their own interests by looking at objects, reading labels, and forming their own questions.

As far as affective and social aspects of the visits are concerned, bringing the children to the museum itself is a way of giving the children a rich experience. In fact, the English teachers had done more than this because they incorporated emotional and social aspects into their visit agendas. For example, in order to give the children a good time, Rita and Susan deliberately planned their afternoon sessions informally --- the children drew what they liked in their own time, or were taken to a hands-on gallery to play. In particular, the final stop on Susan's itinerary was nothing to do with academic learning but aimed to give the children an unforgettable experience: the children were taken to see impressively large mammals before they returned to school. As for expanding the children's social experience, Mike, as discussed earlier, made efforts to include parents in the visit, in an attempt to encourage them to bring their children to the museum again. In Susan's case, the museum visit was regarded as a great opportunity to train the children to behave appropriately in public. She continually addressed this concern with her class, spending considerable time reminding them to behave sensibly and maturely before, during and after the museum visit.

In summary, the English teachers' objectives for the museum visits were definitely more than a reinforcement of the subject knowledge in the curriculum: they catered for several different dimensions --- educational, personal and social. A focus on specific curriculum requirements was combined with more holistic, child-centred educational approaches: different curriculum subjects such as Art and English were integrated into Science learning; the training of independent learning skills was combined with the acquisition of subject knowledge; social and affective sides of learning were fostered alongside cognitive development. The hybridisation model, which is used to describe current English schooling

(cf. 2.4.3, p. 31), is evident in the way the English teachers planned their museum agendas.

In contrast to the English teachers' multiple objectives, the teachers in Taiwan believed that the purpose of museum visits was mainly for social reasons, that is, to popularise the trend of museum visits and to expand children's life experience. As far as learning was concerned, they seemed to have much less clear ideas in this respect and little intention of associating the visits with their teaching in school.

Although the Taiwanese teachers regarded the visit more as a day out than a formal learning session, surprisingly, all the participant teachers as well as the schools,¹⁰⁴ unanimously expected the children to attend the museum's educational programmes in order to obtain in-depth knowledge. Furthermore, most of the teachers had explicitly reminded the children to pay close attention to the talks given by tour guides or museum educators. This implies that for the teachers, the desire for the children to accumulate information was apparently a prominent part of their visit agenda, although they may not have been aware of it: they simply thought that the nature of the visits was to enrich the children's social experience.

This implication is further supported by Su's study (1998). This study shows that Taiwanese teachers' favourite ways of using museums (a multiple-choice question), appeared to be as follows, in order of preference: 'Listening to tour guides' (92.8%), 'Attending educational programmes including watching or listening to media' (73.4%), 'Students working on worksheets' (73.4%), 'Teachers lead students to visit' (15.1%) and 'Let students visit the museum by themselves' (10.8%) (p. 168-169). This finding strongly indicates that Taiwanese teachers much prefer formal, structured ways of visiting museums than following an agenda according to their own plans or the students' interests. This result mirrors the schooling culture in Taiwan, where great emphasis is placed on the accumulation of factual knowledge and students are expected to carefully follow the instructions given by the model (the teacher).

In a similar way to the English cases, the Taiwanese teachers' objectives for the museum visits were to a great extent affected by their schooling culture. Ostensibly, the teachers viewed the purpose of the museum visit from its social perspective; in fact, they continuously

¹⁰⁴ The standpoints of the schools were represented by staff from the Office of Pedagogy, who organised visits for the teachers.

yet unconsciously stressed the pedagogical concerns brought from their school contexts. This phenomenon demonstrates the persistence of teachers' habits and ideas even when they encountered a rapid change in educational structure (cf. 2.3, p. 19-20), such as being in a totally different educational environment, like a museum.

7.4.2 Expectations of the Teaching Role

As the English teachers had clear learning objectives for their visits, they regarded this kind of events, in Rita's words, as "an intensive teaching session". As for how they expected to fulfil their teaching role in the museum, being a helper or facilitator seems to be a proper summary of their expectations. This can be supported both by the teachers' statements and their teaching behaviour observed during the visit. For example, Rita explained her role in the museum in these terms: "I will discuss the exhibits with children and help them to find out the relevant information they need to complete the worksheets, and to draw out a discussion." Furthermore, as observed in the case studies, the teachers were never seen to instruct the children didactically, using methods such as giving a talk to the whole class, but were often seen to be helping the students by reading labels, giving directions, and prompting discussions. A more detailed account of their teaching behaviour will be discussed in section 7.5.3 later.

The idea that the teacher's role is as a helper, rather than a knowledge provider, clearly comes from the progressive tradition which has a pedagogical focus more on the learner and the learning process than the teacher and the subject matter.¹⁰⁵ Because of this assumption, English teachers tend to be happier with the idea of engaging other adults, such as parents, who may not have expertise in teaching, to help children in the class. This suggestion is confirmed by a striking finding in Broadfoot's study, which shows that 67% of teachers in England have asked parents to help with classroom activities, half of them (51%) even saying that this happens at least once a week (Broadfoot et al., 1993: 60). The study by the SCAA (1996: 4) also found that in some schools, "visits are seen as an important way of encouraging parents' involvement in pupils' learning", and they have developed policies in this regard. Under these circumstances, it is not surprising to find in the case studies that the English teachers expected the parents to assist with the children's learning, rather than just looking after their safety during the visits.

¹⁰⁵ Here uses a comparative term. It does not indicate that progressive education does not care about teaching and subject matters, but suggests that the aspects of the learner and learning process are emphasised more.

In comparison, Taiwanese teachers have a very different view of their teaching role, and consequently, a different attitude towards involving parents in teaching. Gardner (1989: 258), as well as Stevenson and Stigler (1992: 166-167), describe an ideal Chinese teacher as a 'skilled performer': (s)he must know the substance of the curriculum very well, like an actor knows the script or a musician knows the score, in order to present lessons to his/her audience---the students. This metaphor, the teacher as a skilled performer, echoes the traditional Chinese perception of the teacher as a model. It underlines the cultural belief in teaching as a solemn profession which requires substantial subject knowledge, special expertise and long, hard training. This belief may explain why teachers are so valued and respected in Chinese society. It also explains why parents, even though they often assist with their children's learning at home, are rarely involved in teaching in schools. This was observed in the case studies, where, although the schools had many parent volunteers ('Ai-Shing Ma Ma', meaning 'kind mothers'), they only offered help with administrative work and were never seen in the class.

The assumption stated above profoundly affects Taiwanese teachers' attitudes regarding what they should do in a museum. As seen in the case studies, the teachers were rather reluctant to take on a teaching role in the museum, instead relying heavily on the museum's educational services. This attitude was partly due to the fact that the teachers felt the visits were irrelevant to their teaching in school, and partly because the teachers did not feel competent to teach children in the museum as they were neither familiar with the content on display nor had sufficient training in using museums.

Interestingly, the lack of confidence in teaching in the museum was not only a problem for the homeroom teachers, but also for the specialist teachers. For example, a natural science teacher, Tsai, had been to the National Museum of Natural Science more than ten times but still felt uneasy about teaching children there. Another teacher, Lin, who was once a natural science teacher and claimed to be very interested in this subject, was also hesitant about teaching the children in the context of a museum. Another specialist teacher in the pilot study said that he felt he had 'lost face' once when a student asked him questions in the museum which he could not answer.

The teachers' lack of confidence apparently deterred them from actively getting involved in the children's learning in the museum, not to mention the fact that the teachers had never

come across the idea of asking parents to assist them in their teaching. Accordingly, teaching in museums was expected to be almost the entire responsibility of museum educators, who the teachers assumed were specially trained and professionally qualified, and were thus in a better position to teach the children. As a result, the teachers regarded their duty in the museum to be either to ensure the children's safety, or to maintain the discipline of the class, so that museum educators could give their lessons without disturbance.

7.4.3 Expectations of the Museum

Apart from the teachers' agendas brought from their school contexts, the teachers' perceptions of the museum visited also affected their expectations and usage of the museum. It is very interesting to find that both the English and Taiwanese teachers saw the museums they visited as being predominantly educational institutions (the Natural History Museum in London, and the National Museum of Natural Science in Taichung). This finding is particularly interesting in the case of Taiwan, where the educational function of museums has only been promoted since the late 1980s (cf. 3.5.1, p. 88). It indicates that the educational image of museums prevails and is universally recognised.

Although the English and Taiwanese teachers had similar impressions of the museums they visited, they nevertheless had very different expectations of how to use these educational institutions. In the English cases, the teachers mentioned the prestigious academic standing of the Natural History Museum in its field. They also wished to exploit the expertise of the museum staff in the subject area, as well as obtain their advice on how to use the museum collections to support the National Curriculum. Having said that, they did not wish to be dictated to by the museum, regarding how to use its resources. In other words, the teachers welcome the museum's services and advice, but prefer to retain their autonomy in deciding how to use the resources, depending on their teaching needs. Taking Rita as an example, she commented on the use of museum services as follows: "I think that it's definitely necessary for teachers to do the visit a couple of weeks before the school session, before the school actually goes on the visit, to discuss what they really want from the visit. But it will be nice if we can get the help from the museums, they obviously know a lot more about the subject than myself and other teachers." Mike expressed a similar feeling. He said that he did not always use the guidebook or guided tours provided by museums, because the use of the museum services really depends on his teaching needs as well as the quality of these services.

The question of why a teacher chooses to visit this particular museum (interview question 23) aims to further probe the issue regarding what the teacher expects the museum to offer. Overwhelmingly, all the teachers used the phrase ‘child-friendly’ to describe their favourite feature of the Natural History Museum, explaining that its encouraging environment---allowing children to touch, to explore, to play--- is the most significant reason why they take their classes there. This finding echoes that of another survey which reveals that ‘a warm welcome’ was given as the top priority when choosing a museum to visit by the teachers interviewed (Swift and Wilkinson, 1999: 51). The English teachers’ emphasis on this criterion once again reflects their belief in the child-centred approach, which requires a learning environment that is conducive to independent exploration. It also closely relates to the teachers’ visit agendas, in terms of the children having a first-hand, independent and enjoyable learning experience.

In comparison, the Taiwanese teachers similarly regarded the National Museum of Natural Science as a prestigious educational institution, but they tended to treat it more like an authoritative figure, and relied much more on this authority to provide information for the children as well as arrange educational programmes for them to attend. In comparison to the English teachers’ attitude, the Taiwanese teachers regarded attendance at the museum’s educational programmes to be imperative, rather than an option. This view was not only clearly stated by the teachers but was also revealed in the case studies, in which the students were all attending the museum’s programmes, despite the fact that the teachers had no clear idea of the content.

The tendency to rely heavily on the museum’s educational services is clearly shown by two findings in Su’s study (1998). Firstly, as discussed earlier, ‘listening to the guided tour’ (92.8%) and ‘attending educational programmes’ (73.4%) are Taiwanese teachers’ preferred ways of visiting museums, compared to only 15.1% of teachers who choose to lead the students by themselves and only 10.8% of them who prefer to let students visit the museum alone (p: 168-169). Secondly, Su’s study also asked for teachers’ opinions regarding what services, provided by a museum, would most encourage them to organise a visit. ‘Providing the service of guided tours’, once again, appears to be the teachers’ top choice (89.1%) (p. 171-172).¹⁰⁶

¹⁰⁶ Both questions were designed for multiple choice.

Taiwanese teachers' strong demands on museum educational services clearly reflect the Chinese cultural expectations of a teaching figure: whether as a teacher or an educational organisation, (s)he/it is supposed to provide profound knowledge in a well-organised manner. Significantly, since such an expectation is also shared by the museum educators, it strongly indicates that this ideology is entrenched in the society and is shared by all of its members. In Chin's study (1996) of 16 educators in the National Museum of Natural Science, the educators were interviewed about their opinions regarding their role in educating the audience. The data reveals that 11 out of 16 educators were of the opinion that 'giving information about the content of exhibitions to the audience' was their chief role (p: 209). The study also found that although the educators had mentioned that they tried to raise the audience's interest by using various stimulating approaches, the promotion of interest was not an end itself but a means to achieving the final goal --- to help the audience to understand the scientific information (p: 213-214).

In summary, this section has discussed and compared various aspects of the English and Taiwanese teachers' expectations of the museum visits: where to visit, what to see, what the children should do, who should be teaching in the museum and what kind of help the museum should offer. The next section will further examine the teachers' actual museum experiences, including the preparation and follow-up work. It will also examine how the teachers' agendas were realised when they conducted their museum visits.

7.5 Teacher's Museum Experience

7.5.1 Preparation Before the Visit

7.5.1.1 Preparing as a Teacher

It can be seen in the case studies that the English teachers had made noticeable efforts in preparing themselves for the upcoming museum visits, with activities such as making preliminary visits to the museum, contacting the museum staff, inquiring about materials from the museum, preparing worksheets, etc. Such preparation was regarded by the teachers as an indispensable step in planning a visit. It helped them to refine their visit agendas, focusing on what they could do and how to do it in a real museum setting.

Preparing teaching materials is part of an English teacher's daily work, as Rita commented: "There is a lot of teacher's input (in preparation), there isn't a folder you can go to which will give you all the information about plants and animals (the topic the children are now learning), you must gather all the information yourself.... you are going to explain the materials to the children in an enthusiastic manner, you will be enthusiastic about it if you put some hard work into it." As observed in the case studies, the teachers rarely relied on textbooks or any single resource to teach lessons, but had to compile their teaching materials from various resources. For this reason, when they were at teacher training colleges, they had been taught how to use resources outside the school. Susan vividly recalled her experience of being taught how to use museums and galleries:

"I did it (teacher training course) in Liverpool, I went to the museum in Liverpool, and attended the course for teachers about how to use the gallery. So actually, it was very much encouraged, it was actually built into your course. We had a particular day to teach you how to use the artefacts, how to use the museum, what kind of things you can do with children. When you did your teaching practice, you actually organised a school visit to museums as part of teaching practice.... In eight weeks of teaching practice, I went on three visits. It really seems to be important to do that...." (A/46)

Because the teachers are required to design their own teaching materials most of the time, they are more selective in choosing materials and do not wish to be constrained to a single resource. This attitude is clearly shown in the way that Rita and Susan used the worksheets provided by the Natural History Museum: they did not completely adopt the pre-designed worksheets but carefully adjusted the contents to suit their needs. Importantly, the services provided by the NHM seem to be in accord with this practice, encouraging teachers to use its services independently (cf. 3.4.2).

Although the English teachers had sufficiently prepared themselves for the visits, the adults who accompanied the trips were not properly informed by the teachers about what was expected of them during the visits. As seen in the case studies, the helpers, rather than just guarding the children's safety, were asked to assist their learning either by helping them to do the worksheets (in Rita's and Susan's cases) or leading them around the museum (in Mike's case). Although the helpers were expected to play an active teaching role, their tasks were not clearly explained, let alone being properly advised on how to assist the children in order to achieve these tasks. The lack of communication between the teachers and the helpers

inevitably undermines the potential contributions the helpers may make towards the children's learning. According to Vygotsky's theory, adults have a profound influence over the development of children, especially during social interaction (cf. 3.3, p.68). Several studies have also proved that accompanying adults play an important, productive role in children's learning in museums (Cooper, 1997; Pontin, 1997; Moussouri, 1997). This highlights the importance of giving orientation to helpers so that their role and tasks are explained beforehand. However, this aspect is neglected by teachers as seen in this study.

Despite the shortcoming mentioned above, the English teachers had made noticeable efforts to prepare themselves before visiting the museum. In contrast, the Taiwanese teachers had done very little in this regard, as most of the preparation had been done by the schools and the teachers had little opportunity to participate in this process.

Many problems ensued when the schools contacted the museum before the visits. On one hand, the schools just booked the visits and programmes they intended to join without requesting any further information from the museum. On the other hand, the museum staff merely took the bookings without giving the schools further details about the programmes that had been booked. Because of the negligence of both parties, awkward incidents frequently occurred. For example, in Hwang's case (Taiwanese Case Study 1), the school was not aware of the shortage of tour guides until the students turned up at the museum; in Lin's case (Taiwanese Case Study 2), the school was not informed about the administration fee that would apply when it booked the visit. These careless mistakes could have been easily avoided if the museum had provided sufficient advice to the schools when they had booked the visits.

In fact, it is quite surprising to find that although the NMNS has elaborate educational services and a large number of school audiences, there is no specialised team that caters for school parties. Despite a remarkable number of about 100 people working in the museum's Education Department, there is only one member of staff to take school bookings, and no one else to answer enquiries from schools. Furthermore, although the museum does provide a lot of information about its educational services, very little advice is given to teachers regarding how to use the museum if they do not wish to attend the museum programmes, but want to visit the galleries by themselves. In addition, the physical context of the museum--- the lack of an assembly area for school parties, also makes management of classes problematic.

Without an adequate space in the museum, it is difficult for teachers to provide orientation for a large group of students, or to give them materials to do before the visit, let alone check or collect their work afterwards. It seems that the museum services are successful at encouraging schools towards attending its pre-designed programmes but largely failing to provide the necessary assistance teachers need if they wish to use its resources self-directly. This tendency presents an obvious contrast to the school services provided by the NHM, London, as just discussed. It is clear that the museum agenda, in terms of the educational services and the physical context provided, will inevitably affect teachers' museum usage. The result, as seen in the case studies, was that the schools and the teachers in Taiwan were just passively and routinely attending the museum activities rather than actively and creatively utilising the museum's resource according to their needs.

7.5.1.2 Preparing Children

In England, some studies have commented that the quality of pupils' preparatory work for outings varies from school to school (cf. 3.4.2, p.77). This inconsistency was also observed in the case studies. In the cases of Susan and Mike, the children had been clearly informed about the itinerary for, and the learning purposes of, the visit, as well as doing intensive class work to support these objectives. In contrast, Rita did not feel it necessary to draw the children's attention to, nor ask them to do any work designed for, the forthcoming visit. The main reason, as she explained, was that the children were already familiar with the topic that would be studied during the visit. As they were taken out nearly every week, they were also very used to learning outside the school.

Rita's attitude towards preparation is particularly interesting as it reveals that even teachers, who have ample experience of organising outings may not necessarily conduct museum visits in the ways recommended by museum researchers. Many researchers have highlighted the importance of preparation, demonstrating that the students who carried out some forms of preparation before the trip learned significantly more than those who had not done any work (Price and Hein, 1991; Falk and Dierking, 2000: 76-77). This suggests that people can learn better when they feel at ease with their surroundings and know what they are expected to see or to do (Falk and Dierking, 2000: 139). In Rita's case, although, as seen in the case study, her students are very used to outings and to learning in a new environment, they still need to be informed beforehand about the particular physical context of the museum they are visiting

and the exact task they are expected to do. Such preparation will create what Falk and Dierking call 'informed expectations' (Falk and Dierking, 1992: 37), which can not only reduce the children's feeling of disorientation in the unfamiliar environment, but also reinforce their positive attitudes towards the visit. The quality of learning can therefore be enhanced.

A negligent attitude towards preparing children for a visit was more apparent in the Taiwanese cases. As seen in the case studies, many teachers did not have definite objectives for the visits, and so no purposeful class work was done in advance. However, two teachers, Lin and Tsai, had spent more time than other teachers discussing the forthcoming visits with the children. For Lin, the purpose of discussion was to raise the children's interest and expectations about the museum programmes they were going to attend. As for Tsai, one of his aims was to make the children treat the visit more seriously than just regarding it as a fun day out.

The teachers' reluctance to prepare further exposes a disagreement between specialist teachers and homeroom teachers in Taiwan. As seen in this study, both parties assumed that preparing children in school is the responsibility of another party rather than its own. On the one hand, homeroom teachers felt that the subject of natural science was beyond their professional capacity; on the other hand, the specialist teachers did not feel responsible for the children's learning because they would not be accompanying the trip. This problem clearly existed but had never been discussed between the homeroom and specialist teachers. Even in Case Study 3, in which natural science teacher Tsai did accompany the trip, he never mentioned a word to homeroom teacher Chang about cooperating, or sharing the workload on the day of the visit. It seems that the teachers tried to avoid talking about it, in order to avoid conflict between colleagues.¹⁰⁷ However, without a consensus regarding whose responsibility the teaching should be, or how to share this responsibility, the teachers tended to ignore their teaching duty. The children had very little input from the teachers and this definitely undermined the educational potential of the museum visits.

¹⁰⁷ In Tsai's case, although he thought that the homeroom teacher should share the teaching responsibility with him, he did not feel it appropriate for him to tell her how to do her job.

7.5.2 Teaching in the Museum

With regard to the teachers' experiences inside the museums, various issues such as which galleries the teachers planned to visit, what activities they expected the children to do, and what objectives they wished to achieve, were discussed respectively in the previous section (cf.7.4). Furthermore, examples were given which demonstrated how these expectations/agendas were fulfilled when the teachers were in the museums. Therefore, the following section will specifically focus on the teachers' teaching behaviours.

7.5.2.1 Interaction with the Children

A distinction between individualised and whole-class interaction can be easily observed among the English and Taiwanese teachers through the ways the teachers managed their classes, organised tasks and taught the children.

As far as management of the class is concerned, the English teachers, for example Rita and Mike, divided the children into groups and assigned an adult to take charge of each group. The purpose of such an arrangement was not only to manage the children more easily, but also to foster individualised learning. By doing so, as Mike explained, the children could get more effective one-to-one interaction and more individual attention. As a result, there were as few as three or four children in each group in Mike's class. This approach was very different from what was observed in Taiwan, where despite the comparatively large class sizes, the children were kept together as a whole class most of the time. Although Chang and Lin did split the children into groups before they went to explore the museum, their purpose in doing this was not to facilitate learning, but merely to prevent children from going missing by keeping them together in groups.

Differentiation is also another important strategy used by English teachers to facilitate individualised learning. The concept of differentiation aims to cater for children's different needs by identifying their learning abilities and then setting varying tasks that match individual levels. Although it is a hard concept to carry out well, some English teachers appear to try their best to achieve it. Taking Susan as an example, she stated that: "Ideally, we would like to think that we are teaching based on children's individual needs, but you cannot do it with thirty children. So basically, you will do it for three groups, bottom,

middle and top, that's what you always have in your mind." Although Susan did not divide the children according to their different abilities during the visit, she did however pay extra attention to the children who needed more help. For example, she designed a different worksheet specially for a child with learning difficulties. Also, while she monitored the children's work progress, she carefully kept an eye on the children who were less able, and asked the other adult helpers to do the same. Rita also differentiated between the children's learning levels by dividing them into three groups and designing two types of worksheet accordingly.¹⁰⁸ Furthermore, before and after the visit, the children were also grouped and led by two teachers (Rita and the student teacher) to discuss the content of their work. In comparison, examples of differentiation were rarely found in the Taiwanese cases. The children were acting as a unit most of the time, attending the same programmes, following the group rules, etc.¹⁰⁹ During the time of my study, children were never observed to be given different tasks according to their abilities, either in the museum or in the class.

As far as the teachers' teaching behaviour is concerned, the English teachers appeared to have a lot more interaction with the children and their teaching approaches were much less formal. A talk or lesson addressed to the whole class rarely occurred except when the teachers had orientation sessions with their classes at the beginning of the visits. The patterns of this teaching behaviour closely matched the expected role of the English teachers, that of being a helper or facilitator. Taking Susan and Mike as examples, they were hardly ever seen to formally instruct the children inside the museum. Instead they often interacted, spontaneously or deliberately, either with individuals or small groups of students, by directing their attention, offering help, asking or answering questions, etc. Compared to Susan and Mike, Rita seemed to play a more dominant teaching role, as she often directed the children regarding what to do with their worksheets and frequently addressed her comments to the whole group rather than to individual children. However, she was also not seen to directly impart information to the children; rather, she constantly used questions to introduce her points, and most importantly, to promote the children's thinking and raise discussions. The children seemed to be very used to Rita's teaching approach. They did not, as observed, passively receive information; they enthusiastically responded to Rita's questions and shared each other's ideas.

¹⁰⁸ Two groups used one type of worksheet, the third group used the other kind of worksheet.

¹⁰⁹ The aspect of following the group rules was stressed by the Taiwanese teachers but not so much by the English teachers. For example, teacher Chang punished a student for not sticking to his group but playing with hands-on exhibits alone. See also the discussion in section 7.3.3.

In contrast, individual interactions among the teachers and the children appeared to be much less common in the Taiwanese cases. The educational programmes that the children attended were addressed to the whole class and were structured as specialised lectures which focused exclusively on the subject matter. Most of the programmes (such as the lessons in the Space Theatre and Classroom Theatre, and the guided tours) lasted as long as forty or fifty minutes. During these long sessions, the museum educators (including tour guides), who dressed in formal suits and spoke through microphones, carried out their lessons like 'show-and-tell',¹¹⁰ lectures by showing visual aids (such as films and slides) and imparting information to the audience. The children were expected to be quiet and to listen carefully to the educators' talk while the teachers accompanying the group maintained discipline. Sometimes the educators would raise questions and then ask for responses from the students. However, these interactions were very brief and were not developed into more profound discussions. It was also rare to see the children taking the initiative to raise questions. In general, the interactions during these lessons were mostly one way.

Although most of the museum educators observed in the NMNS used the expository, formal, structured styles of teaching described above, one exception was found in this study. In Taiwanese Case Study 3, the museum educator in the Classroom Theatre applied a much more dynamic approach to delivering her lesson, using techniques such as games, demonstrations, and object handling, and having more lively interactions with the children through asking questions and encouraging discussions. Teacher Tsai commented that the class were lucky to be taught by this educator because, based on his experience, not many museum educators were able to address scientific topics in such an engaging manner. This comment exposes a special phenomenon in the NMNS --- the quality of its educational services very much depends on the performance of the individual educators. It was revealed in a later interview with one of the museum educators that the training they have received from the museum is mostly concerned with developing their scientific knowledge. They have little guidance regarding the issue of how to deliver this knowledge to the audience. Neither have they been taught how to adjust their teaching methods to suit different types of visitor. In other words, the emphasis of the museum's training is placed much more on the subject matter than pedagogical concerns. This once again demonstrates the abiding belief of the Chinese in the importance of the educator's (teacher's) subject knowledge, as described

¹¹⁰ This phrase is quoted in Booth, Krockover, Woods (1982: 16), and describes the kind of guided tours that does not involve active participation from the audience.

earlier.

As far as the participant teachers' teaching is concerned, because the children were attending the museum's educational programmes for most of their visits, the teachers naturally had little chance to interact with the children. However, even when the teachers did have the opportunity, they neither took it, nor acted upon it properly. For example, when the children in Lin and Chang's classes were allowed to explore on their own after attending the museum's activities, the teachers made no attempt to approach the children. Specialist teacher Tsai had tried to offer help to the children while they were exploring. However, his attempt failed because he was overwhelmed by the children's restless movements around the museum, and he eventually gave up the idea of helping. This failure was obviously due to Tsai's lack of experience in interacting with children in such an open and informal environment.

7.5.2.2 Working with Objects

Research has suggested that the ways that teachers from the Chinese heritage use objects in teaching are different from that of their western counterparts. In a comparative study, it was found that the purpose of manipulating objects, for Chinese teachers, is to 'prove the theory', while for American teachers, it is to 'discover the theory' (Su, Su and Goldstien, 1994: 263). A similar result was found in a study comparing teachers in Singapore and the UK. It was suggested that Singapore teachers tend to use practical demonstration (using objects) to 'confirm' a theory. For English teachers, the use of objects is to 'infer' a theory (Galton, 1997: 109).

This thesis also found that the English and Taiwanese teachers used objects in teaching in very different ways. Despite the fact that the English teachers also used objects to deliver information or to illustrate their points, they had more active ways of working with objects for a range of purposes. For example, rather than just giving direct statements about an object, the English teachers frequently used questions to elicit the children's understanding of the object, and applied this as a basis for making further comments or raise discussions.¹¹¹ Furthermore, objects were often used for training in cross-curriculum skills such as

¹¹¹ For example, questions, such as 'What do you see? Tell me.', 'Do you understand..., explain it to me.', 'Who can tell me how it (the exhibit) works?' were often used by Rita for this learning purpose.

observation, investigation and language development. From time to time, the teachers would deliberately stop the children and draw their attention to certain objects, asking them to look at them closely from different perspectives.¹¹² Drawing the object was another means of encouraging sustained observation. In addition, the teachers often used the technique of making comparisons among objects to encourage prolonged observation, as this method also cultivated the children's investigative skills, enabling them to make relationships between objects. On some of these occasions, it was observed that these comparisons between objects were an effective means of developing the children's abstract thinking skills.¹¹³ Vocabulary building was also incorporated into the learning process, when the teachers deliberately used new words to describe the objects, or guided the children to read labels. If possible, the children were encouraged to touch objects in order for them to use senses other than sight.

In comparison, object-teaching was not commonly practised in the Taiwanese cases, despite the fact that many programmes in the NMNS claimed to use objects to facilitate learning. For example, in the museum's brochure, it is stated that "living animals, specimens, reproductions" are to be used in the Classroom Theatre lessons.¹¹⁴ However, it was observed that most of the lessons were orally presented by the museum educators. Although various devices such as audio-visual aids, were frequently used to make the lessons more appealing, real objects or even replicas were rarely used by the museum educators, except by the one in Case Study 3 just mentioned above. Even though this educator did let the children handle objects, she did not develop this teaching opportunity but simply passed the objects around the children. It seemed that her purpose for using objects was to illustrate the single-faceted information she was giving rather than to study the object itself by exploring its multiple meanings or to develop the children's sensory experiences.

7.5.2.3 Curriculum Hybridisation

The English teachers generally displayed an inclination towards the progressive styles of teaching as described above. However, it is important to point out that their teaching behaviour was not a pure form of progressive education; it was still mixed with traditional

¹¹² See examples in Rita's case, p. 144.

¹¹³ Examples regarding the children's 'zone of proximal development' can be found in Mike's case, see p. 173-174.

¹¹⁴ See the Museum's booklet, *The National Museum of Natural Science*, (1993), p. 39.

teaching approaches. These mixed teaching styles also reflect the multiple objectives of their agenda: on one hand, to reinforce the subject knowledge, and on the other hand, to develop the children's learning capacity. This feature of curriculum hybridisation can be clearly observed in the cases of Rita and Susan.

In Rita's case, although one of her aims in preparing worksheets was to develop the children's investigative skills, the children were nevertheless not given sufficient autonomy to exercise the skills of independent leaning. For example, they were kept close together in a group and their route around the exhibits followed the questions on the sheets exactly. In addition, the group's learning pace was controlled by Rita. There was little opportunity for the children to look around the gallery, choosing what they wanted to look at, or to spend more time on the subject they were interested in studying further. In the case of Susan, although she gave the children freedom to explore the gallery when they were doing their tasks, she constantly chased after the children, reminding them to answer the questions on the worksheets and directing them to find the correct answers. As these two cases show, although Rita and Susan had never used didactic approaches, such as lecturing the students, they still controlled the children's learning to some extent in order to meet their expectations and the predetermined learning outcomes.

Apart from the mix of two different pedagogical styles as described above, the misinterpretation of an innovative practice is another phenomenon caused by curriculum hybridisation. It is suggested that if teachers do not fully understand an educational innovation, they tend to execute the new practice according to their own understanding or simply bolt it onto their existing conventions. One example of this can be seen in Lin's case. While Lin's class was left alone to explore the museum's hands-on exhibits, Lin did not offer them any help, nor did he think such help was necessary. Firstly, he presumed that the purpose of hands-on exhibits was to let the children play by themselves without any adult interference. Secondly, he thought that his teaching responsibility was towards the whole class, and so he was not so concerned about offering one-to-one help.

The first reason may be due to Lin's partial understanding of the purpose of the hands-on activities and the meaning of self-directed learning--- because children, even when they are learning alone, still need adult help and assistance in order to maximise their 'zone of proximal development'. In comparison, the English teachers had done much better in this

respect. As observed, while the children were alone playing with exhibits, the teachers did not rest aside but were very busy monitoring their progress, offering help if necessary and reinforcing the children's experience. Lin's second reason for not intervening was clearly influenced by the emphasis put on collective attainments during his daily teaching practices in school. For these two reasons, it seems fair to suggest that both Lin's personal interpretation of how to use hands-on activities, and his conventional teaching habits, had made him believe that it was inappropriate for the teacher to get involved in the children's learning in the museum.

A similar situation of curriculum hybridisation can also be found in Tsai's case. Teacher Tsai was the only teacher in the Taiwanese case studies who prepared worksheets for the children. One of his purposes, like that of his English counterparts, was to enable the children to focus on learning rather than just having fun during the museum visit. However, apart from this, he deliberately warned the children that their worksheets would be marked as an exam result. In other words, the worksheet was also used as a test mechanism to force the children to learn. It is fair to suggest that although teacher Tsai was open-minded enough to try the new idea of using worksheets in museums, his way of using them was inevitably influenced by the prevailing exam culture of Taiwanese schooling.

7.5.2.4 The Effect of the Teacher's Agenda on the Children

Apart from examining how the teachers' agendas were manifested during their visits, it is also important to know to what extent these agendas had affected the children's behaviour. Apparently, the children's museum experiences in terms of where they visited, what they did and how they learned did not occur haphazardly, but were significantly influenced by what the teachers had expected of them, and had expressed to them either consciously or unconsciously.

Taking Rita's and Susan's cases as examples, both of them had very fixed and definite agendas for the morning sessions of their visits, that is to complete the worksheets. Therefore, the children's experience during that period of time was very much task-driven and teacher-led as just discussed. Compared to the strictly scheduled tasks for the morning sessions, their plans for the afternoon were more informal and flexible. For example, the children in Rita's class were encouraged to draw exhibits at their own pace. As for Susan's

class, the children were allowed to freely explore the hands-on gallery, and were actively encouraged to play with exhibits. During these afternoon sessions, it seems that Rita and Susan had more intimate interaction with the children and the learning was more child-led, relaxed, and socially orientated. A similar phenomenon was observed in the case of Mike, who also had a flexible agenda for the visit. Although Mike had certain objectives in mind, he did not rigidly plan what to do in the museum, but grasped the opportunity to teach when a chance presented itself. As a result, a lot of spontaneous teaching occurred in Mike's group, based on what the children had just seen or the questions they raised. It was also observed that the children often took the lead in determining their route around the displays, which was usually followed by Mike.

Regarding the cases in Taiwan, the teachers' agendas seemed to be too open to be defined. In general, the teachers welcomed what the museum had to offer and gave the children total freedom to explore the museum when they were not attending the museum's activities. However, such an open agenda may well reflect either the teachers' indifference towards the visits, or their lack of understanding regarding how to utilise the museum more effectively. As a result, the children did not get sufficient preparation for the visit, or the help they needed when they were exposed to a learning environment which was so different from school.

By comparing the effects of different styles of teaching agenda on the children's experiences, it is fair to suggest that if the teacher has a very rigid agenda, the children's behaviour will be dominated by this agenda. Consequently they may lose a sense of autonomy in their learning, and may treat the museum visit as merely an extension of class work. This suggestion is supported by the findings of several studies (Jensen, 1994; Lebeau et al.¹¹⁵) which indicate that children enjoy their learning more and the quality of their learning is also enhanced, if they are given the chance to exercise their own agendas rather than follow that imposed by teachers in the museum. Although the above research suggests that children should be granted ownership of the learning in free-choice learning environments like museums, it does not mean that children should be allowed to wander alone, without proper orientation or guidance from teachers. In fact, if the teacher's agenda is too undefined to give children clear ideas as to why they have to come or what they should do, they may feel lost and confused in the museum.

¹¹⁵ Lebeau, R. B., Gyamfi, P., Wizevich, K., and Koster, E. 'Supporting and documenting free-choice in informal science learning environments'; quoted in Falk and Dierking (2000: 86).

Although it is not the objective of this thesis to evaluate the effects teachers' agendas have on the children's experiences, the discussion raised above does highlight an important issue regarding the extent to which a teacher's museum agenda should be flexible or rigid. To answer this question, the unique learning experience offered by museums should be considered. For the purpose of nurturing independent study skills and a lifelong love of learning as emphasised by museum pedagogy (cf. Chapter 3.3), it is suggested that teachers should have clear purposes for their visits, but at the same time, they should keep their plans as flexible as possible. They should be guiding, rather than controlling, children towards the learning objectives and enabling children to take control of their learning and to generate more personal experiences in the museum.

7.5.3 Follow-up Work and Comments

For the English teachers, follow-up work also counted as an essential and integral part of the visits. The purpose of this work was not only to reinforce the children's museum experience, but also to evaluate what the children had learned in order to plan the next stage of their teaching. Therefore, the teachers all emphasised that the follow-up work would not be a one-off event, but a continuous process: the children's museum experience would constantly be reviewed, discussed and expanded during the rest of the term.

Discussing the museum visit with the children was the first activity the English teachers did after the visit. The form of the discussion, as emphasised by the teachers, aimed to be as informal as possible so that the children could share their experiences freely and comfortably. In addition to this, Rita and Susan paid extra attention to discussing the answers of the questions on the worksheets.

Although the discussion was supposed to be informal, it was not simply an idle chat. The teachers had tried to grasp what the children had already learned or achieved in advance, in order to lead the discussion more effectively. For example, Rita and Susan made efforts to check the children's worksheets before the discussion so that they could then spend more time clarifying the children's misconceptions. As for Mike, he had asked the children to do group presentations before the discussion, briefly telling other groups what they had seen and what had impressed them most in the museum. By doing this, Mike was able to form a general idea of the museum experience of groups other than his own.

During these discussions, it was often observed that the children were encouraged to take charge of the activity, while the teachers carefully listened to their ideas or experiences first, and then tried to make comments, verifying or correcting the children's answers and adding relevant information. This kind of informal discussion, as the teachers explained, was commonly used by them to assess the children's learning. It indicates that the teachers' assessment of learning was more than just checking the children's answers on worksheets: they also attempted to understand the children's learning process in terms of what they had experienced and how they had arrived at their ideas or conclusions.

With regard to whether the museum visit was a useful experience, it was found that the teachers' comments in this respect closely corresponded to whether their museum agendas had been achieved. In Rita's and Susan's cases, they were not quite satisfied with the children's answers on the worksheets, as they had not done as well as the teachers had expected. With the exception of this disappointment, the teachers generally believed that the visits were worthwhile, and all made very positive comments about the benefits for the children, particularly in terms of enriching their life experience and developing their learning capacities. In Mike's case, he was very satisfied with the outcomes of the children's learning because, through discussion, he was surprised to find that the children had actually learned more than he anticipated when they explored independently in the museum. He also noticed that the children's enthusiasm for the subject had greatly increased after the visit. He was very happy that some of the children were interested in re-visiting the museum with their parents. This also achieved the social agenda he had set for the visit.

The teachers' comments on the visits indicate that the museum may not be an ideal place for achieving a closed learning outcome, such as filling in correct answers on worksheets. However, it does lend itself better to what Falk and Dierking term 'meaningful learning', which in this context emphasises the learner's long-term memories, changed attitudes, and newly developed skills (cf. 3.3, p.69). It is this unique learning experience which compelled the teachers to conduct the museum visits in the first place and made them feel that the visits were worthwhile. It also made them want to conduct future visits, despite the fact that worksheets may have been not completed in the way they expected.

Apart from comments on the children's learning, the English teachers all mentioned the importance of the accompanying adults in determining the success of their visits. A

responsible, experienced helper can relieve the teacher's burden of looking after the children, as well as share the teaching responsibility; on the other hand, an irresponsible helper can prove to be a hindrance. Although the adult helpers play such an important role in visits, they are often inadequately prepared for their role, as seen in the case studies. Furthermore, this area of study regarding the role that helpers play in school visits has been neglected in the research so far. Some researchers have become aware of this problem, warning that many helpers "are uncertain about how to make themselves useful and how to manage the experience in order to get the best out of it for the children" (Brown, Oliver and Bazley, 1997: 24). This note of caution, along with the findings of this thesis, highlight an important yet often overlooked issue which needs to be investigated in the future.

In the Taiwanese cases, the follow-up work, like preparation, was neglected by many teachers. The homeroom teachers, like Hwang and Chang, did not feel confident enough to discuss with the children about their museum experience. It was partly because they were unfamiliar with the subject of natural science, and partly because, as Hwang complained, they did not quite understand the exact educational purpose of the visit. Hwang went on to criticise the NMNS, saying that although it has elaborate hardware--- such as facilities and programmes, it ignores the software--- communication with its users, as teachers are poorly informed by the museum about what they should do or what children may gain from the visit. This inevitably leads schools and teachers to be negligent in carrying out museum visits, passively regarding them as a top-down policy imposed on them, and relying heavily on the museum's educational services.

As for teachers Lin and Tsai, who were more concerned about the educational value of the visits, they carried out some informal discussions with the children as follow-up work. Because neither of them had set definite learning objectives for the visits, the purpose of the discussion was to reinforce the children's memories in the hope that these memories would be sustained and be useful to the children in the future. Therefore, the discussion was more like a chat, including various aspects of the museum experience, such as the children's social behaviour in the museum, their feelings about the museum programmes, etc.

As for the teachers' comments on the usefulness of the visits, there are several interesting findings which echo some points discussed in previous sections. Firstly, when the teachers were asked whether the visit was a useful experience for the children, many of them tended to

answer this question by analysing how much the children had learned during the trip. In other words, the teachers' criteria for assessing the worthiness of the museum visit were mostly based on its educational aspects, even though they claimed that the visit was mainly carried out for social reasons. This implies that the Taiwanese teachers had high expectations of learning taking place in the museum although they may not have been aware of it, or mentioned it explicitly (cf. 7.4.1, p. 254).

Secondly, when the teachers assessed the children's learning experience, they tended to analyse it by considering the quality of the museum educational programmes attended rather than from the children's actual responses or experiences that the teachers learned through later discussion. From this it can be inferred that the Taiwanese teachers assume that if the quality of the educational programmes is good, the children can consequently learn well. This way of assessing children's learning is slightly different from that used by the English teachers. Although the English teachers also commented on how the museum's services, such as labels or worksheets, affected the children's learning, they also spent time gathering information on the children's personal learning experiences through discussions or through their own observations. Based on this understanding, the English teachers then assessed whether the children's learning was successful or not. The different ways of assessing children's learning found in the English and Taiwanese cases, actually reflect two opposite pedagogies as suggested by Hein's educational theory: one stresses the importance of the 'lesson' which implants information in the learner's mind, the other emphasises the learner and the learning process (cf. 2.2 and 7.3.1).

Thirdly, from the teachers' comments, there seem to have been two main criteria for judging the quality of the museum services: one requirement was that the programme should be engaging and using various devices to stimulate the children's interest and offering a different learning experience from that experienced in school. The other requirement was that the programmes should be well structured and clearly presented, so that the children could absorb the information quickly and easily. These criteria imply that the teachers did recognise that museums were different learning environments from schools and did expect them to offer a more engaging and active experience to children. Having said that, they also believed that the potential for offering well-organised, in-depth knowledge is essential for a good educational service. In other words, their expectations of museums are a mixture of the wish for a new learning venue and the traditional belief of what an ideal educational institution

should offer.

Understanding the teachers' comments on their museum experience is important, because their reflections are not just the end of the actual event but also act as a prelude for preparing a future visit. As Baxter suggested (1997: 252), teachers' formal and informal evaluations of a visit directly influence subsequent decisions about organising visits. Although the Taiwanese teachers may not have the autonomy in planning their visits, their attitudes may easily be passed on to the students as well as influence the ways they treat museum visits in the future. In both the English and Taiwanese cases, it was found that the ways the teachers evaluated the success of the visits were significantly related to their expectations and beliefs brought from their schooling contexts. This finding echoes the suggestion made by Falk and Dierking (1992: 33-34), that each visitor brings his/her own agenda when (s)he comes to the museum: if this agenda is not fulfilled, no matter how wonderful the rest of the visit, they may somehow still feel unsatisfied.

Conclusion

This chapter consists of two main themes. The first one depicts the broader contexts of schooling in England and Taiwan in which the teachers' agendas are formed. More specifically, section 7.2 discusses the external elements of the school context, such as educational structures, curricula, official requests, and traditions of outings, which may influence the museum visits. 7.3 further explores the teachers' internal perceptions and values regarding the museum visit. These two sections are examined through the analysis of not only the teachers' own statements, but also the teachers' daily practice observed in school and by the theoretical framework proposed in 7.1.

The second theme of this chapter is a comparison of the English and Taiwanese teachers' actual museum experiences conducted during the period of the case studies. Importantly, the teachers' museum experiences are examined as a continuous process which starts from the teachers' expectations of (7.4) and preparation before the visits (7.5.1), through the events inside the museums (7.5.2), to their comments on these experiences and the related follow-up work carried out afterwards (7.5.3). In addition to the comparison of patterns found in the teachers' museum experiences, these patterns are further explained through the lens of schooling contexts.

Based on the comparison and discussion presented in this chapter, it is fair to conclude that, due to the differences, both structural and ideological, in their schooling contexts, English and Taiwanese teachers go to museums for different reasons and with different values and expectations. Consequently, they have quite contrasting museum experiences. These differences are briefly summarised in Table 7.1.

Although the patterns of teachers' museum experiences in these countries are mostly different, it is also true that some similarities can be found. For example, teachers in both countries recognised the social value of the museum visits and regarded the museum as an important educational institution despite the fact that they used this resource in different ways. Furthermore, because of the current trends of educational reform in both countries, the phenomenon of curriculum hybridisation, which often occurs in schools, can also be observed during museum visits.

Last but not least, it is also found that some educational ideas shared by the teachers within each country are in accord with the agenda of the museum they visited. For example, the NHM in London helps teachers to make self-directed use of its resources, while the NMNH in Taiwan seems to place more stress on providing pre-designed programmes and subject knowledge to students. This demonstrates that these educational ideologies do not exist in the minds of the teachers in isolation but are commonly shared and practised by all members of society.

**Table 7.1. Differences between the teachers' agendas museum experiences
in England and Taiwan**

ENGLAND	TAIWAN
THE CONTEXTS OF THE MUSEUM VISIT	
1. The visit is carried out according to the individual teacher's professional judgment, but is encouraged by the school ethos and the National Curriculum.	1. The visit is carried out because of the demands of the local educational authority. It is very rare for an individual teacher to initiate a museum visit.
2. An activity for a single class or a year group.	2. An annual activity for a year group or the whole school.
3. The teacher has a very positive attitude towards the visit from both social and educational perspectives.	3. The teacher has a positive attitude towards the visit from the social perspective. However, children's learning is considered to be the museum's rather than the teacher's responsibility.
4. The visit is part of a formal lesson.	4. The visit is irrelevant to teaching in the class. Both homeroom teachers and specialist teachers feel less responsible for the visit
5. The National Curriculum has a significant impact on the visit.	5. The visit is not related to the National Curriculum.
6. Teacher's impression of the NHM, London: a useful educational resource, very child-friendly, very stimulating, very accessible to children.	6. Teacher's impression of the NMNS, Taichung: a prestigious academic institution, good facilities, good specialism in its field.
THE OBJECTIVES OF THE VISIT	
1. Educationally, the teacher has clear learning objectives: --- reinforce the subject knowledge taught in the class. --- increase children's first-hand experience. --- foster children's learning skills (investigation, observation, comparison etc.). --- ignite children's interest in the subject taught.	1. Educationally, the teacher has no clear learning objectives, because: --- the visit is not relevant to his/her teaching --- (s)he is not aware of the educational purpose of the visit . --- (s)he relies on the museum to fulfil the teaching role.

2. Socially, the teacher expects the visit : --- to enrich children's life experience --- to bring children into contact with cultural resources. --- to train children to become more independent in public.	2. Socially, the teacher expects the visit : --- to broaden children's life experience. --- to popularise the trend of museum visits. --- to train children to learn and to obey the group rules in public.
PREPARATION BEFORE THE VISIT	
1. The teacher has done a lot of preparation for him/herself as a teacher and for the class before the visit, including a pre-visit, designing a worksheet, doing class work etc.	1. Most of the administrative work has been done by the school. The teacher has merely been informed by the school about the itinerary of the visit.
2. The materials provided by the museum, such as information packs and worksheets, are very useful to the teacher's preparation.	2. Communication between the museum and the school is inefficient. The museum does not clearly inform the school about the educational purpose of the visit; the school does not take an interest in asking for information from the museum.
3. The NHM is encouraging teachers towards self-directed use of its resources.	3. The NMNS does provide adequate educational programmes but fails to advise teachers on how to use its resources independently.
THE VISIT AT THE MUSEUM	
1. The ways the teacher uses the museum mainly correspond to his/her own plan and expectations set up before the visit.	1. The teacher prefers formal, structured ways of using the museum, e.g. attending the museum's educational programmes or guided tours.
2. The teacher plays an intensive teaching role as a helper or facilitator. Direct instruction is rarely observed during the visit.	2. The teacher does not play a teaching role, because (s)he is not confident in teaching the subject knowledge of natural science and thus expects the museum educators to take charge of teaching.
3. Children are expected to look at objects closely or to look for information themselves.	3. Children are expected to carefully listen to the museum educators, carefully watch films or read labels.
4. Comparatively, children have much more one-to-one interaction.	4. Comparatively, children have much less one-to-one interaction with their teacher. However, they receive a lot of whole class instruction (mainly from the

	museum educators.)
5. Children are grouped and given different tasks.	5. Children act in unison most of time.
6. Parents are accompanying the visit and are expected to play an active teaching role.	6. Usually, there are no parents or specialist teachers to accompany the visit.
THE FOLLOW-UP WORK AND COMMENTS	
1. The follow-up work is a continuous process: the children's museum experience will be reviewed, discussed and expanded during the rest of the term.	1. The visit is a one-off event, and little work is done by the teacher afterwards.
2. The result of the children's learning is informally assessed by the teacher, and this serves as guidance for the teaching at the next stage.	2. The teacher's comment on whether the visit is useful to the children by mainly considering how good/bad the museum educational services are and consequently how much the children can learn from them.
3. The teacher's assessment of how much the children have learned and whether the visit was worthwhile is mainly done through observation during the visits and discussion with the children afterwards.	3. The teacher's evaluation of the quality of the museum services is based on the criteria: --- it provides an active, stimulating learning experience which is different from that in school. --- it provides in-depth, well-organised information which is easier for students to absorb.

CHAPTER 8

CONCLUSION

8.1 Summary of the Research

Education has become the key industry around the world in the 21st century. Museums and schools work hand in hand in order to pursue a society of educational excellence: museums provide an alternative learning experience to that of schools in order to maximize children's development; schools foster an interest and habit of using museums among children for the purpose of lifelong learning.

While museums and schools are encouraged to work closely, there is very little in-depth research on teachers, the key mediators of these two educational institutions, whose efforts determine the success of museum-school collaboration. A deep understanding of teachers' beliefs, expectations, and habits of using museums is notably absent from the studies evaluating museum education. It is even rarer for researchers to study how teachers' opinions and experiences of museum visits are affected by the school contexts in which they routinely work. This thesis aims to fill this gap in the research area. It attempts to examine how a teacher approaches museums from his/her own perspective and how (s)he uses museums in a real life context. It also aims to explore how the schooling context affects the teacher's attitudes and experiences in this regard.

This thesis conducted six case studies to gain unique insights from the individual English and Taiwanese teachers regarding their viewpoints of museum visits in school life. The results of the cross-case comparison further confirmed the hypothesis of this thesis that the schooling context has significant impacts on the teacher's agenda and museum experience. Teachers, either explicitly or implicitly, do bring a set of values, needs and expectations to museums. These preconceptions, in other words the teacher's agenda, are deeply shaped by the

schooling context in which the teacher works. A teacher's agenda influences the ways (s)he uses a museum and interacts with the children inside this venue. It is also an important set of indicators for the teacher to assess the museum experience, and this consequently influences his/her agenda for the next museum visit. The findings of this thesis confirm those of many other studies which stress the importance of the prior knowledge and experience that visitors bring to exhibits (Falk and Dierking, 1992; Macdonald, 1993; Moussouri, 1997; Tunnicliffe, Lucas and Osborne, 1997). This once again raises an important issue for museums to rethink the complexity of teachers' pre-visit agendas if they want to develop effective communication with teachers.

A surprising but significant finding of this thesis is that museum agendas, to some extent, accord with teachers' agendas within the same country. This may be due to the fact that teachers and museums are affected by the same ideologies, traditions and trends, in other words the broader context of the society in which they exist. This finding supports many theories discussed in Chapter 2, which stress the impact of social-cultural contexts on educational activities, which extend from individual human behaviour to whole systems of institutions. The insight is particularly important for museums which intend to transplant foreign practice into their own policies. It provides a starting point for such a museum to predict what possible experiences and problems its visitors may bring when they encounter the innovations. It also urges the museum to use a holistic perspective to re-examine its agenda and practice in relation to its own society as well as to the countries from which it adopts ideas and practice.

8.2 Review of the Research Findings.

8.2.1 The Consistency of Ideas and Structures

By comparing the English and Taiwanese case studies, this thesis has demonstrated that schooling contexts have profound impacts on teachers' agendas and museum experiences. The theories of Alexander (1984, 1992, 1995) and Galton (1997) helped me to further identify that primary ideologies and educational structures are the two main components forming a schooling context. The ideological system determines to a great extent teachers' assumptions in the areas of learning, teaching and knowledge. It also plays a predominate role in influencing teachers' attitudes towards and the values they put on using educational

resources such as museums. Significantly, this ideological system does not exist alone but, in most cases, is reinforced by a set of corresponding educational structures in order to maintain the cohesion and stability of schooling.

The interplay between educational ideologies and structures creates the distinctive primary schooling culture of a particular country, which may support or deter museum visits. As demonstrated in this thesis, the overriding reason for English teachers to conduct a museum visit is their educational belief that the museum experience can give children direct experience, raise their motivation, and develop their personal and intellectual independency. Such a belief, which is derived from the values of progressive education, has formed the prevailing culture of visiting museums among English primary schools, supported by principals, colleagues and many parents. This culture is also supported by the underlying structures of the English educational system, in terms of its administrative system, curriculum schemes, and teaching schedules. These structures grant English teachers comparatively more autonomy and flexibility in organising a museum visit and planning their visit agendas.

In comparison, until recent decades, learning in museums has been absent from practice in Taiwanese primary schools. Ideologically, Taiwanese education is deeply influenced by the Confucian ideas of learning which emphasise modelling, hard-work and collective goals. These features are completely contrary to the rationale of museum education which encourages children to interact, to play and to explore inside museums. Structurally, the conditions of the Taiwanese educational system, such as the centralised administration, tight and fixed teaching schedules, the division of homeroom and specialist teachers, and the lack of adults able to help during visits, further increase difficulties for teachers if they wish to initiate a museum visit by themselves. Because there are insufficient educational ideas and structures sustaining the practice of outings in Taiwanese schooling, museum visits rarely happen in schools unless the educational authorities require schools to do so. Even when schools conduct museum visits to meet the official requirements, most of the teachers are unaware of the purpose of the visits, and merely treat them as one-off social events.

The above discussion reveals a complex, inseparable relationship between educational ideas and structures within an educational system. It further implies that the success of an educational practice, in this case, a school visit to a museum, cannot depend on a single strategy alone but has to rely on the support of the whole framework of a schooling system.

This insight provides a holistic perspective for policy makers and museum professionals to reconsider how to build the relationship between museums and schools.

In the case of Taiwan, the culture of museum visits is apparent absent in primary schooling. This absence cannot be filled by just one policy, such as demanding schools to visit museums, nor can it be expected to be filled immediately. It indeed requires much more comprehensive planning and work, covering the areas from changing teachers' ideas to adjusting educational structures, to gradually turn the current Taiwanese primary schooling into that of favouring museum visits. By comparison, the distinctive culture of museum visits in English primary schooling is highlighted, which otherwise may easily be taken for granted. This is indeed a long-established tradition built upon the synergy of a complicated set of ideas and structures over a long period of time. This solid foundation should be fully recognised by policy makers and museum professionals. They need to fully exploit this foundation and use it as a launch pad to move the relationship of museums and schools forward.

8.2.2 Challenges and Opportunities for Changing Times

Although the results of this research suggest that schooling is maintained in a stable condition most of the time, it is also pointed out that schooling is not in a fixed state but is evolving according to the changes in the socio-cultural circumstances of the society. During the time of this research, educational reforms in England and Taiwan have brought many unprecedented changes into their schools. These changes not only gradually reform the profiles of schooling in the two countries; they also propose new challenges and opportunities for museums to reshape their relationships with schools.

In England, although museum visits are part of the life of many primary schools, the nature of this tradition has been gradually changed by the Education Reform Act. English teachers still conduct museum visits despite having to overcome the pressure of league tables, statutory teaching hours, and tight financial budgets sometimes. Having said that, the purpose of their visits is now clearly not only for fulfilling their progressive aspirations but also to meet the curriculum requirements, especially those asking them to increase children's subject knowledge. Sometimes, the latter consideration has overridden other aspects of teachers' agendas, which forms a trend of museum visits becoming more knowledge-based and

task-oriented.

This trend reveals an underlying problem that many teachers now tend to impose the pedagogy and objectives applied in schools onto museum settings (Griffin, 1994; Price and Hein, 1991; Talboys, 1996; Baxter, 1997); also many museum educators tend to focus too narrowly on the demands of teachers and the curriculum, rather than on what museums can and should offer. There is a danger here because museum education cannot have its full impact if it is treated as an extension of the school classroom. Regarding this problem, Reeve (1997: 10) suggests the following: “museums are not part of the school system, nor should they be.... we have to articulate and concentrate on how museums and galleries can operate as alternative ways of learning and experience, and demonstrate their particular value in doing so.” Accordingly, the challenge for museums in England is to prevent themselves being passively subordinate to the school learning experience. Instead, they should extend and enrich this experience by continuously developing their unique educational potentials as well actively demonstrating it for teachers.

In the case of Taiwan, the recent educational reform which aims to promote individualised learning and lifelong learning has brought a growing practice of museum visits among primary schools. Because of the government’s policy, museum visits are no longer a foreign idea, but are dutifully carried out by schools. Teachers have become more aware that museums are useful educational resources that need to be introduced to children. Having said that, many teachers tend to treat museum visits as official routines without understanding their educational purpose, let alone their usefulness to teaching in schools. Because of this, many teachers do not consider a museum visit as part of their professional responsibility and consequently display evident disinterest in such an event. Unfortunately, this indifferent attitude has become prevalent among Taiwanese teachers alongside the increasing trend of school visits to museums. This not only undermines the full educational impact of museums, it also forecasts a more serious problem: once this negligent attitude is firmly rooted in teachers’ minds and has become a norm in school life, it becomes difficult to be cured; changing a habit is more difficult than forming one.

The challenge for museums in Taiwan, accordingly, is to change teachers’ attitudes towards museum visits by clearly informing teachers about the museums’ own agendas: why schools need to come to museums, and what museums wish them to gain. Museums should make

teachers fully aware of their uniqueness and significance: how museum education is different from school education, and how children can mostly benefit from their visiting experiences. The discussion of Chapter 3 (cf. 3.3) in this thesis has provided some clues to answer these questions. Apart from differentiating between the strengths of museums and schools, it is also important for museums to help teachers integrate the museum experience into their teaching in school. For example, teachers may need to know how to use museums to facilitate the individualised learning that is much encouraged by the recent educational reform.

Significantly, it needs to be pointed out that before museums in Taiwan can justify why schools should come to museums, it is essential for museums to firstly re-examine and re-define their educational agendas. Taking the National Museum of Natural Science as an example, although it is a leading museum in the field of museum education in Taiwan, this thesis found that its educational agenda seems to be ambiguous and ill defined. On the one hand, the museum wishes to encourage informal, self-directed learning; on the other hand, a lot of its educational practice seems to be didactic and places too much stress on subject knowledge. The museum's agenda is clearly affected by the traditional ideologies of Chinese education to a great extent.

The case of the NMNS actually exposes a fundamental problem similar to that of 'curriculum hybridisation' discussed in the schooling contexts (cf. 2.3): some museums may simply imitate foreign practice without discerning the rationales behind its designs. Therefore, they may use their own interpretations, mainly based on their existing ideas, to carry out the innovative. This may result in the inappropriate or partial implementation of the new practice. Taking Classroom Theatres at the NMNS as an example, many sessions in these classrooms turned out to be lectures imparting factual knowledge despite the fact that the original purpose of this adopted programme is to provide further opportunities for visitors to interact with museum educators and objects. This problem may be due to the museum educators not being clear about the rationale behind this programme and the fact that the training they receive is mostly concerned with subject knowledge.

By identifying the issue of curriculum hybridisation, this thesis argues that museums in Taiwan need to clarify their agendas. The formation of these agendas needs to be based on a thorough understanding of the rationale of museum education which emphasises object

learning, self-directed learning and socially- mediated learning. Museums should also have the ability to discern possible influences of the existing ideologies and conventional practice in Taiwan when they attempt to implement foreign innovations. Only if a clear, appropriate agenda is defined, will museums be able to form a sound partnership with schools. This relationship is based on the quality of students' museum experiences, rather than the quantity of the school audience.

8.2.3 Re-examining Teacher's Agenda

The use of a qualitative, case study approach in this thesis has provided a rich picture of the whole process of a teacher's museum experience in the school context. Mostly importantly, it has illustrated how the teacher's agenda has affected his/her museum experience, including the relevant work done in school and the interaction with children during the visit. Such an approach yields several interesting findings which cannot be obtained by quantitative methods.

First of all, the thesis found that if a teacher has a fixed agenda, the behaviour of the whole school group inside the museums is significantly dominated by that agenda and less affected by the museum agenda. This finding is supported by the results of other studies suggesting that if visitors have a 'focused' agenda, they have a specific route to follow and might miss other things that museums want to offer (Moussouri, 1997; Falk, Moussouri and Coulson, 1998). This research differed from the other studies in that it further explored how visitors, in this case teachers, developed their agendas in their life contexts. Such a close examination of the formation of the agendas reveals some problems for museums to consider.

As seen in this thesis, some of the English teachers, like Rita and Susan, know clearly what they want from museum visits. These teachers normally have had ample experience of outings and are more confident about planning their visits and using museums. Furthermore, they are more selective about museum services and may need little assistance from museums. Such independence, on the positive side, means that a teacher can use museum resources accordingly to the needs of his/her class and teaching. On the negative side, this independence may cause a problem if the teacher's agenda does not match the museum's agenda but the teacher still assumes that (s)he is using the museum in the right ways. The most apparent example is the emerging tendency for English teachers to put more stress on

the aspect of subject knowledge, consequently, museum visits become more knowledge-based.

The above finding suggests the following questions for museums to consider. How can museums ensure that teachers' agendas match museums' agendas? If the teachers' agendas contradict museums' agendas, how can museums challenge the teachers' perceptions and pre-determined plans? Also, how can museums find the chance to communicate with these teachers who are normally confident enough to plan their visits alone without needing the museums' assistance, or who may just partially select museums' messages or services in order to meet their own agendas, for example, using museum worksheets to reinforce subject knowledge? These questions need to be taken into consideration, if museums wish teachers to not only use their resources independently but also appropriately.

Secondly, in contrast to teachers' fixed agendas, some teachers may come to museums without specific plans or purposes. It would be wrong to assume that these teachers do not have certain expectations and perceptions of how to use museums. As demonstrated in this thesis, many Taiwanese teachers regarded a museum visit to be a social event, but they did have certain ideas of how children should behave inside museums and what museums should offer. These implicit expectations and perceptions, in other words 'hidden agendas', are as significant as manifest plans or itineraries in influencing teachers' museum experiences.

This finding reminds museums to examine the nature of teachers' agendas with care. A teacher's agenda may include two dimensions: one is the teacher's evident plan and objectives which directly relate to his/her teaching in school; the other includes the teacher's latent values, attitudes and presumptions brought from his/her prior knowledge or experience. It is easy for museums to overlook the latter part of the agenda; many teachers are also unaware of it. In order to uncover teachers' hidden agendas, museums need to use more elaborate research design employing multiple methods, such as interviews and observations, in order to fully explore the meaning behind teachers' words and actions.

Thirdly, it is possible for teachers to implement their agendas in ways which are not expected by museums, even though their agendas seem to meet the museums' agendas. For example, this thesis has found that teachers had different ways of helping children's independent learning in museums. For example, Rita and Susan claimed to foster children's self-directed

learning during visits, but in fact they did not give the children sufficient freedom to exercise this skill during the morning sessions. Teacher Lin thought that independent learning means giving children total freedom to play and to explore in the museums without any adult interference. Although teacher T sai wanted to help children at first, he gave up this idea because he was too overwhelmed by their restless movements inside the museum.

The above examples expose a problem: although these teachers agreed with the idea of encouraging children to learn independently in museums, they did not implement it in a proper manner. It is predicted that many teachers may have this problem because they normally have little training and experience of teaching in museums. In some cases, this problem may even cause teachers to feel confused and frustrated. This thesis, therefore, suggests that museums, apart from making their agendas clear to teachers, need to give practical guidance and clear strategies to teachers regarding how to put these agendas into practice. The same suggestion also extends to helpers who accompany children during a museum visit. They normally play a significant role in helping children's learning during the visits and, therefore, need to receive advice from teachers and museums regarding how to undertake their role appropriately.

8.3 Contributions and Recommendations

There are two theoretical contributions made by this thesis. Firstly, this research serves as a pioneering attempt to consider the impact of contextual factors on teachers' museum experiences. The influence of contextual factors on education has been extensively discussed in many academic disciplines (cf. Chapter 2), but is rarely applied to the evaluation of museum education. In this thesis, an effort has been made throughout the research process to establish a sound theoretical framework which can not only identify the most pertinent contextual factors but also illustrate the effects of these factors on teachers' museum experiences. The development of such a theoretical framework was indeed a process of continuous refinement which was not completed until the cross-case comparison was finally made. This framework was eventually constructed as Figure 7.1 and presented in Chapter 7 (p. 234). As shown in Figure 7.1, the factors of schooling culture and the teacher's agenda are identified as the two most prominent influences on a teacher's museum experience, which confirms the hypothesis proposed at the outset of the thesis. In addition, the museum culture and the museum's agenda, two factors which were originally overlooked but emerged from

the data collection process, were eventually integrated into this final model. This framework has compellingly elucidated how the interplay of these four influences, namely the school culture, the teacher's agenda, the museum culture and the museum's agenda, have shaped a teacher's museum experience as discussed in Chapter 7. This framework has demonstrated its significance by providing a clear and accessible model for exploring the contextual factors as far as a teacher's museum experience is concerned.

The second theoretical contribution of this thesis is a simplification of the complex schooling context into the two significant, principal elements, namely educational ideas and structures. These two elements help practitioners to easily identify possible influences on teachers when they try to organise a museum visit within a school context. In addition, as the impact of schooling context on teachers is the primary focus of the discussion in this thesis, some crucial issues regarding the interplay between the educational ideas and structures within a schooling context are carefully examined here. For example, the inseparable relationship between educational ideas and structures has been highlighted and the problem of curriculum hybridisation which is caused by the inconsistencies in this relationship has also been exposed.

In particular, the concept of curriculum hybridisation reveals possible problems when changes in education only happen on the surface of educational structures rather than deep down at the level of people's ideas and attitudes. This prospect has ensured the researcher of this thesis to examine teachers' museum experiences with caution. As shown, this thesis has carefully discerned the complexity of the teachers' museum agendas and consequently, has proved that the teachers' agendas are often mixed with different sets of values and expectations derived from contradictory educational paradigms. Furthermore, the teachers' words were not taken for granted and their actions were carefully investigated in this thesis. As a result, it was found that some teachers, either consciously or unconsciously, still used their conventional ideas to interpret or their existing habits to implement the new practice they encountered in the museums. The concept of curriculum hybridisation also exposed the problems of the NMNS in Taiwan, in terms of its ambiguous agenda and the contradictory educational approaches observed. The case of the NMNS serves as a good example to illustrate problems similar to those of curriculum hybridisation arising when museums intend to import foreign practices without considering the native socio-cultural context. In sum, the concept of curriculum hybridisation has substantially strengthened the critical analysis of this thesis.

Such a discerning perspective is considered to be imperative in the current shifting context where the blending of ideas and practice has rapidly increased in both schools and museums.

The theoretical development of this thesis summarised above also generates some possible directions for researchers to explore further. For example, further research could use the perspective of schooling contexts to examine the agendas and experiences that children have during school trips to museums. It would be interesting to compare the results of such a study with that of research on children going to museums as part of a family day out. Furthermore, while this thesis uses the concept of curriculum hybridisation to examine teachers' museum experiences, further research could apply this concept to examine museums' own agendas and practices. A critical assessment of how successful museums have been at implementing innovations adopted from abroad is apparently absent in the field of museum studies, despite the fact that many museums constantly refer to museum practices in other countries for inspiration.

In terms of methodological contributions, this thesis has employed the qualitative case study approach for its strengths in offering an in-depth understanding of the subject's unique viewpoints and of the specific context of the event. These two aspects are often neglected in most visitor studies which tend to provide generalised, quantitative data (cf. 3.2). Some studies of school visits to museums do provide more detailed information about teachers' attitudes. For example, Baxter's study (1997) offered interview data regarding English teachers' opinions of school visits, including visits to museums, under the conditions of the recent educational reform; Liou (1997) conducted both interviews with and observations of Taiwanese teachers during their school visits to the NMNS. However, these studies did not further explore how the teacher's opinions and museum experiences are developed in his/her school context. This requires the approach of actually participating in school life and recording every step of the process of conducting a museum visit.

As seen in this thesis, the qualitative case study approach has offered a thorough analysis of teachers' agendas and museum experiences in relation to the primary schooling context of England and Taiwan. This detailed information helps the museums of these two particular countries to better understand teachers and their connections with schools. Also, by closely examining the effects of a teacher's agenda on his/her museum experience, this thesis has uncovered some intriguing features of a teacher's agenda which may be easily overlooked by

other methodological approaches. In general, the findings of this thesis suggest that if the teacher has a fixed agenda, this agenda seems to have a greater impact than the museum agenda on the whole school group. They also suggest that the teacher's agenda is sometimes hidden and cannot always be articulated by the teacher; it may not match the museum's agenda, and even when it does, it may not be implemented in the ways the museum expects. These features and their impacts have been discussed in detail in section 8.2.3 which gives museums some clues as to how they can closely examine teachers' agendas and assess their museum experiences.

Another methodological contribution of this thesis is the use of a comparative approach. The comparison of teachers from two countries has successfully revealed the subtle, implicit aspects of ideas and cultures. In addition, such an approach has broadened practitioners' knowledge regarding museum visitors and practices in different geographic and cultural areas. As most museum studies are concerned with museum visitors and practices in western countries, the study of visitors from eastern countries, such as Taiwan, definitely sheds new light on understanding museum visitors from diverse backgrounds. Apart from its use in examining patterns of visitor behaviour in different countries, the comparative approach can also be applied by museums to investigating their own audience, especially those visitors from different groups, such as different socio-economic backgrounds, cultures, genders, or age groups.

Another significant value of a comparative study lies in providing the opportunity to reflect upon one's own experience by comparing it with the experience of others. By making a comparison with the English case, this study has manifested the problematic relationship between schools and museums in Taiwan. Three major problems found in this relationship can be summarised as follows. Firstly, Taiwanese teachers lack a clear understanding of the value and the purpose of museum visits. Secondly, the Taiwanese education system lacks a series of supportive structures and feasible schemes to encourage museum visits. Thirdly, the NMNS lacks an effective means of communicating with its school audience, as well as appropriately defined agendas and approaches for implementing its educational role. Accordingly, some suitable guidelines are given here to practitioners in both schools and museums in Taiwan in order to address these problems.

On the side of schools, although the current educational policy in Taiwan does encourage

museum visits by demanding that schools visit museums, it is necessary to develop more specific, practical devices in order to strengthen the links between these two different types of educational institution. For example, in order to increase Taiwanese teachers' awareness of the value of museum visits, it is suggested that courses on how to use museums should be included in initial teacher training and in-service training. Such a course should aim to clearly inform teachers about the rationale of museum education as well as equip them with the skills and confidence to use museum resources independently. In addition, for the purpose of consolidating the co-operation between schools and museums, the National Curriculum in Taiwan should clearly identify those curriculum areas which can be expanded on and enriched by the use museum resources. This will offer schools and museums guidelines for working together. Finally, it is necessary for the education system in Taiwan to grant teachers more autonomy and flexibility in planning their teaching schedules and designing their teaching materials. This will mean that teachers would encounter fewer difficulties when they try to organise museum visits and would be more willing to use museum resources.

On the side of museums, two key areas of activities need to be carried out to remedy these problems. The first is that museums should improve their communication with schools, the other is that museums should improve their training for museum educators. In order to illustrate how to put the suggestions made in this thesis into practice, the case of the NHMS is used here as an example.

Regarding the improvement of the museum's system of communicating with schools, it was shown that although the NMNS has elaborate educational services, it apparently lacks a specially trained team catering for schools, and consequently results poor contact with schools. It is therefore suggested that such a team should be set up so that the museum can have a direct channel through which to communicate with schools. Fundamentally, this team should be able to advise schools on how to plan their museum visits and to answer their inquiries. Furthermore, the team should take the initiative to actively advise teachers on how to link the visiting experience with the curriculum areas and their teaching in schools. In order to maximise children's learning experiences, the team also needs to advise teachers on how to carry out preparation and follow-up work when they are in school. Although the main purpose of this team would be to make the museum's agenda clear to schools, it would also be important for the team to take on board the needs and opinions of schools so that the

museum could improve its services accordingly. In other words, this team should play the role of a mediator, aiming to achieve two-way communication between the museum and schools.

Another area of activities in which the museum needs to carry out is in the improvement of the training for its educators. As seen in this thesis, museum educators form the largest department in the NMNS and have many opportunities to work directly with school parties. They however tend to limit their attention on imparting excessive amounts of subject knowledge rather than exploiting the museum's unique learning opportunities for the benefit of their audiences. It is therefore suggested that the training for museum educators should put more emphasis on the rationale of museum education and on the development of pedagogical skills for teaching different age levels of children in museums. In practice, museum educators should use a teaching session as a chance to introduce both teachers and children to the uniqueness of museum education and to explain its differences from school education. In addition, instead of exceedingly imparting subject knowledge, museum educators should teach the basic skills of learning from objects and the investigative skills of learning from multiple resources. At the end of the session, museum educators should provide children with the opportunity to exercise the skills they have just been taught by allowing them to explore a gallery and asking them to complete a specific task. During this teaching process, the museum educator should make learning as interesting and active as possible in the expectation that the children will enjoy the experience and will be motivated to come back to the museum again in their own time.

The final chapter of this thesis has summarised the important findings of this study and has substantiated both the theoretical and methodological contributions. Practical advice is also given regarding how to enhance the relationship between museums and schools in Taiwan. To conclude, museums today are delegated more educational responsibility by society and are expected to work more closely with schools. Museums' ability to fulfill their educational function fully and collaborate effectively with schools is not only a well-sustained commitment of museums, individual countries also see such collaboration as a primary educational objective, and it has become a key concern at an international level. It is within this current context that this thesis wishes to make useful contributions to the discussion of these issues --- to provide museums, researchers, and policy makers with a broader perspective to think globally, and with some specific insights to be applied locally.

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Appendix A

The protocol of interview questions

Most of the questions asked in the British and Taiwanese case studies are the same except questions 16,19,25, in which the differences are distinguished as italics.

A. The feature of the school and the participant teacher

1.The features of the participant teacher

(Personal background: age, years of teaching, teaching training etc.)

2. The features of the school

(the number of the classes and of the students, the community in which the school located, any apparent characteristic of this school etc.)

B. Museum visit in school life

3. Do you think museum visits/outings in general are very important in school life? Why or why not?

4.Could you please describe your school policy/ethos about museum visits or outings in general? Could you give some examples regarding this.

5. How often do you organise museum visits/ outings per year?

6. How do outings or museum visits relate to the your teaching or the curriculum in the school?

7.What aspects do you think that children can benefit most from museum visits?

8. Do you think that it is necessary for schools to carry out the visits for students or should they be family's responsibility of taking their children out?

C. Schooling: Children's learning and teaching objectives.

9. Do you think under what circumstances that children can learn best/what factors can influence children's learning? (This question is concerning about the educational ideology of children's learning)

10. How do you assess students' learning normally?

11. Can you tell me what sort of teaching materials you usually use to facilitate students' learning? Why use them?

12. Could you tell me what sort of teaching training you have received for your teaching career?

13. Did your training encourage you to use museums or other educational resources to facilitate teaching? How?

14. Could you please share your opinions about the recent changes in education brought by the educational reform?

D. The background of the visit

15. Why do you conduct this visit?

(PROMPT: personal choice or school policy? How does it relate to the class work and the National Curriculum?)

16. Why do you choose this museum as a place to visit and to link your work in school?

(PROMPT: pervious experience/ personally or with school visits; colleagues' recommendation; the image of the museum etc.)

Could you please talk about the previous experience of visiting the museum? According to the experience, what is your impression of this museum? (question asked in the Taiwanese cases)

17. Do you have any particular objectives for this visit? What are they? (if not, why not?)

(PROMPT: What do you expect your students to get out from this visit?)

18. Could you please tell me the process of carrying out this visit?

(PROMPT: informed by the school; contact the museum; get permission from the school; have approval from parents; the opinions of your colleagues...)

19. During the above process, what are the most influential factors or difficulties you have encountered which may influence your plans in conducting this visit?

I know the school arranges the visit for you this time. Assuming that you are trying to conduct a visit by yourself, what are the most important factors you have to consider or the biggest difficulty you may encounter ? (question asked in the Taiwanese cases).

E. Preparing the visit

20. Is there any preparation you had done for yourself for this visit? (if not, why?)

(PROMPT: Pre-visit to the museum? Contact the museum and ask further information or service? Design the worksheet? Consult with your colleagues etc.).

21. Is there any class work relevant to the visit which had been done by your students? What is the learning objective of the work? (If no work had been done, why ?)

F. The visit

22. What is your visit agenda for this day?

(PROMPT: Where do you want to go? What do you want to see in the museum?)

How long do you expect for each gallery or activity?)

23. What do you expect that your students can get out from this visit?

(PROMPT: What do you expect they to do in the museum? Do they have any assignment during the trip? For what reasons?)

24. How do you regard your role today in the museum?

(PROMPT: If you have particular learning objectives for the students, how are you going to help your students in the museum?)

25. How do you expect adult helpers to do during the visit?

Do you think that it is necessary for the natural science teacher to come to help during the visit?(question asked in the Taiwanese cases)

G. After the visit

26. What class work you have done after the visit? For what purpose or learning objectives? (If no work has been done, why?)

27. How do you assess your students' learning experience in the museum formally or informally? (If no assessment has been done, why?)

28. What part of the visit do you think was a useful experience to students? Why?

29. What part of the visit do you think was not very useful experience to students? Why?

30. Museums are very different teaching environment compared to classrooms, so have you encountered any difficulty of teaching or managing students in this visiting? or what do you benefit from this visit in terms of teaching experience? Can you give examples?

31. Is there any service you expect that the museum should provide or improve in the future?

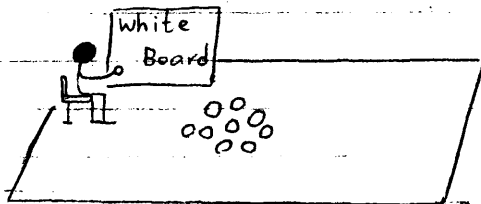
32. Is there any comment on this particular visit you would like to share with me? Please feel free to raise any issue you like to talk about.

Appendix B.1

An example of participant observations in one English class

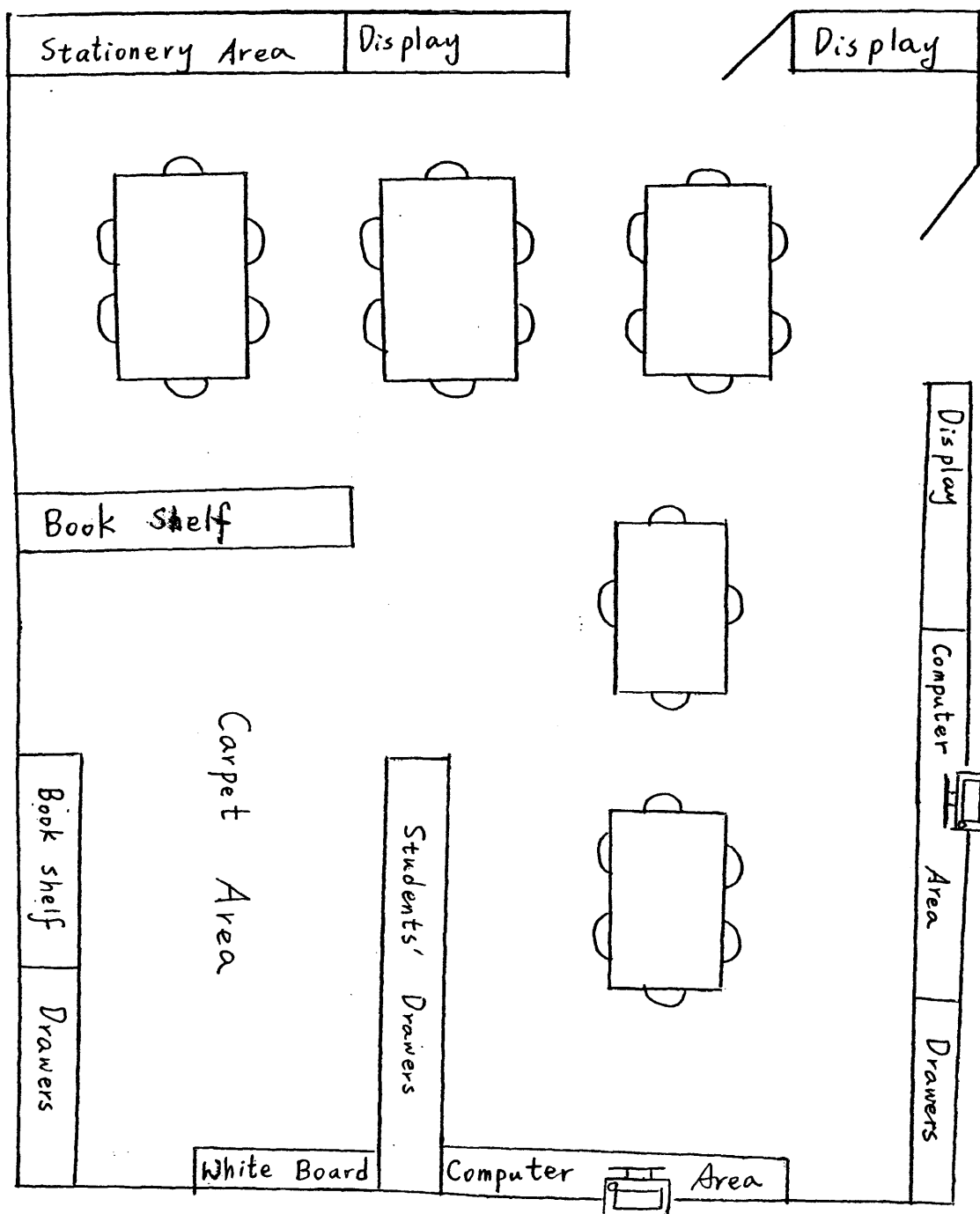
T--- teacher

S--- students

Time	Lesson	Activity	Action
9:10	Maths		- Felix (student teacher) brings 6-7 students out of the classroom and work with them in the shared area.
9:12		① doing whole class teaching	<p>- ① and the rest of the class stay in the classroom. Students all gather in the carpet area:</p>  <p>- ① revises what she had taught in the last lesson.</p>
9:24		⑤ doing individual work	<p>- ⑤ are sent back to their seats and given worksheets to work with.</p> <p>- ① walks around, checking ⑤ progress. Sometimes she sits down with a individual student to discuss / to help his work.</p> <p>- Except Felix, there are another 2 adult helpers working with students today! (one student teacher, one voluntary helper from the local college)</p> <p>- Because so many helpers around, ⑤ have a lot of one-to-one interaction!</p>

Appendix B.2

An example of a classroom layout of one English class



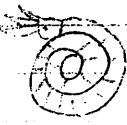

Topic: Humans and Plants as Organisms

Autumn Term

Learning Intentions	P.O.S. links	Activities	Resources, schemes etc.	Evaluation
<ul style="list-style-type: none"> To know that there are life processes common to plants and animals such as growth, nutrition and reproduction 	1a,b	<ul style="list-style-type: none"> Introduce topic and brainstorm ideas in small groups before feeding back findings to the class Focus on plants: <i>'Trees are the lungs of the world'</i> - explain the need to protect our environment 	Nuffield teacher's and pupil's book Thermometer	•
<ul style="list-style-type: none"> To understand that plant growth can be affected by the availability of light, water, space and temperature 	3a	<ul style="list-style-type: none"> Class discuss ideas about what affects plant growth Record ideas and compare with results of experiments How do plants make food? Explain where plants store the sun's energy? Test the energy value of peanuts Test starch content of food Cover up grass and record changes Children to devise simple experiments that direct light from one side only onto plants Test phototropism using red light filters Test the effects of pollutants e.g. detergents on plants 	Tapes Magnifying glass Bi-focal viewers Selection of flowers Pots Red light filters	•
<ul style="list-style-type: none"> To know the life cycle of the flowering plant 	3d	<ul style="list-style-type: none"> Draw out the cycle of a flowering plant seed to seed Research the purpose of the parts of a plant and flower Make a close observational drawing of a flowering plant Dissect bulbs and seeds Look at examples of vegetative reproduction (e.g. spider plant and succulents) Role of insects, wind etc. in pollination/seed dispersal Go on a seed hunt to find how seeds germinate Observe and measure seed growth 	Propagators Soil Growing medium Seeds Magnifying glass Bi-focal viewers Selection of flowers Pots	•
<ul style="list-style-type: none"> To understand food chains, ecosystems and the benefits as well as the problems of micro-organisms 	5c,d 5e	<ul style="list-style-type: none"> Ideas taken from Haringey scheme: Leave a range of foods e.g. apple, potato, banana, in a closed container and make, then record observations over a given time As a contrast, use other non-food materials to see if decay or other changes take place Will decay be aided by warmth, moisture etc.? Conversely, let children devise own experiments to see how decay can be slowed down, letting them think about methods used at home e.g. covering with cling film, cooling, boiling, putting acid lemon/vinegar, salting or sugaring 	Haringey scheme Various food portions Containers Preservatives	

Appendix D

An example of one teacher's teaching related behaviours during a museum visit

Time	Location	People	Action
11:28	A Record of past growth 	T → (GS)	(T): "Come to look this." (T) touches the (E), then asks (GS) to touch it. (T) reads the label, give bits of information to (S).
	 Horns — A record of Age	T ← (IS)	One (S) runs to another (E), calling (T): "Sir, what's this?" (T) is attracted to the (S) and the (E).
	Bamboo — growing fast	T → (GS)	(T) asks (S) to count the ridges of the horns
		T → (IS)	(T) asks one (S) to read the label and then explains the information on it.
11:31		T ← (IS)	another (S) calls for (T). (T) is then attracted to the (S) and the (E)
	Birds Gallery ↓ Ecology	T + (GS)	(T) with (GS) wonder around passing by Birds Gallery, to Ecology Gallery
11:33	(Spinning) Earth	T → (GS)	(T) points to the (E), telling (GS) where is Britain, Europe....
11:35	The atmosphere	T → (GS)	(T) reads the label to (S).

Appendix E

Reflective notes of the museum visit

The visiting itinerary

- 10: 59 Fossils from Britain
- 11: 08 Extinct Mammal
- 11: 02 Birds Gallery
- 11: 24 Gallery 50---Lasting Impression (the area near Birds Gallery, displaying fossils)
- 11: 31 Ecology Gallery
- 11: 59 Assembly area
- 12: 30 Lunch break
- 12: 32 The Hall of the Museum
- 12: 34 Human Biology
- 12: 48 Gift booth
- 12: 50 Mammals Gallery
- 1: 10 Human Biology
- 1: 19 Dinosaurs Gallery
- 1: 40 The Hall of the Museum
- 1: 47 Evolution Gallery (on the first floor)
- 1: 54 Back to the Assembly Area
- 2:00 Prepare to go back to school

My impressions of the visit

1. There are many helpers (eight in total) coming to the visit, including one assistance teacher. The teacher told me that why he needs so many helpers is that he hope each student can get more supervision so he tries to keep the group as small as possible.

Each group have about 3-4 students.

2. In teacher's group, he had three children with him, who he thought had discipline problems. In fact, from the observational data, these children were really active, they often led the visiting route, dragged the teacher to see what they wanted to see.

3. It seems that some helpers regard this visit as an fun day out because they brought cameras with them and took photos of the students during the visit. I am wondering if the helpers really know the educational purpose of the visit?

4. The teacher did not give any work for the students to do during the visit. What's the purpose?

5. Looking at the visiting itinerary, I am very impressed that they went to so many galleries, but stayed in a very short time in each gallery. Although the teacher told me that the purpose of the visit is to see the skeleton, it seems that he has a very open agenda.

5. The teacher did not give any assignment to the students during the visit. I wonder why?

6. Because the teacher only had three children with him, every student had very intensive interaction with the teacher; the teacher's teaching styles was very informal and spontaneous.

7. My impression of the teacher's most common teaching approach during the visit:

- a. Point to the exhibit, ask students questions.(e.g. "Does this fossil remind you of what?"); then raise a discussion or give more information to the student.
- b. Ask the student to have a close look at the exhibit by saying "Let's stand back, have a good look at this...". Or hold the students hands and lead them to the exhibit, saying "Let's find out...".
- c. Ask the students to closely look at and then to compare two exhibits (e.g. compare human's skeleton to other mammal's)
- d. Ask the student to read the labels out loud and word by word. The teacher paid close attentions when the student read and corrected his/her reading sometimes.
- e. Not only give information about the exhibits looked at, but also talk about the history and background of the museum and look at the museum building. It seems to reflect the teacher's social agenda of the visit.

SPECIAL NOTE

THE FOLLOWING
IMAGE IS OF POOR
QUALITY DUE TO THE
ORIGINAL DOCUMENT.

THE BEST AVAILABLE
IMAGE HAS BEEN
ACHIEVED.

Appendix F

An example of analysing interview data

38. Q: Under what circumstances can children learn best?

A: I think that children can learn best when they feel safe in the classroom, when they know exactly how you are going to react when they do something; they have to know what their environment is going to look like; they know when they go to school, you are going to act in a certain way with them, so they don't worry about the emotional side of learning. Children can't learn if they are terrified of you, neither can they learn if they have no respect for you.

feel Safe

I think also that children learn best if they do the thinking themselves. If I write things on the board, they will copy it down, but they haven't got a clue what I am talking about. So a lot of time needs to be spent on hands-on work. For instance, they made the swinging food chains, because it's a model, it's something practical, it's something physical; they do it themselves, and put it together. For these children, they spend a lot of time watching television, things literally go in one ear and out the other. They don't take anything in unless they hold something, smell something, touch it, or talk about it, all these practical things.

practical
experience

I think that their work needs to be very colourful as well, because they enjoy what they are doing, they have pride in what they are doing; and if they are proud of something, they are more likely to keep it in their heads. If I say to them: 'Oh, that's a really nice piece of work', they are more likely to remember that. Basically, the children in this school are doing very well because they are well disciplined, they know exactly what they are going to do, they get different styles of teaching... so knowing the rules, they feel safe so that they can get on their learning without worrying about the discipline side. Even though they just chat and drive me crazy, they do get all their work down.

motivation
confidence

39. Q: Why do you always ask your children to colour their work?

A: To be honest, sometimes, as a teacher, you do need some breathing space, to get organised to prepare the next thing, so I ask them to colour their work to keep them occupied The work should look nice, should be something they are proud of. A lot of these children are now visiting secondary schools, they are going to interviews, showing their work, they want people there to say, 'Wow, that's a very nice piece of work, you did really well with this one.' So they will get some self-respect from what they are doing. I think it's really all about respecting your work, always doing your best to get things done.

confidence

40. Q: What do you regard as a good classroom environment?

A: It's good teaching practice to have at least one piece of work from every child in the classroom, and everybody wants to work in a bright, cheerful environment.. And some teachers do have them in rows, sitting in twos; I don't like that really, because a lot of the time, you need to discuss things, even if it's only five minutes.

motivation

We've got to teach them about how to get on and live in society, so they get to know how they can stick with people, get on with people, learning that you can sit with your friends, with three other people, but you can still do your work.

} work
independent
cooperatively

Learning that in a very crowded society, everyone has his own space; these kinds of things are very important. Basically, the classroom environment should be very bright, as open as possible, and easy to move around, so everybody can see the board, everybody can see you (the teacher), and everybody gets their own space to work. Children get their own works on the walls, everything is quite clearly laid out. All these things are good classroom practices.