HOW EFFECTIVE CAN MULTIMEDIA BE IN LANGUAGE AND CULTURE LEARNING?

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Abstract

This thesis is designed to investigate the potential impact of multimedia on defined aspects of EFL learning practice and to explore the possibility of creating an interactive learning environment via multimedia to raise overseas students' cultural awareness. It focuses on aspects of practical cultural awareness and contrastive rhetoric.

The thesis is based on a three-way comparison of learning outcomes for a group of students being taught in China, a matched group who followed an E-course as a supplement to their learning in China and a group who were based in the UK. The groups were compared on the basis of pre and post -tests. In addition, five approaches to learning via the website were compared and contrasted and five features of contrastive rhetoric were used in the E-course for raising cultural awareness in academic writing.

The results show that the group with access to online multimedia learning was as successful in learning about defined aspects of culture as the UK based group. By the end of the course, the group with access to the E-course had attained a level of scores in relation to defined aspects of English rhetoric in academic writing similar to that of the native English speakers.

Data analysis also showed that the pedagogical approaches that involved students' active learning functioned better than the other pedagogical approaches. It reveals that (1) a multimedia interactive learning environment is effective in helping overseas students acquire cultural knowledge for practical purposes; (2) multimedia is conducive to online interactive communication between students with different cultural backgrounds; (3) multimedia resources are useful for comparing rhetoric across cultures; (4) multimedia not only facilitates language and culture learning but also helps students to become autonomous and life-long learners.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

The advent of the Internet and the Web in the early 1990s motivated and inspired researchers to investigate the problems of designing web-based courses (Hiltz 1994, Harasim 1995, Khan 1997, Barron 1998, and Jung 2001). Since then, the Web has been developed as an efficient, interactive technology for creating active learning environments. The new technology was accompanied by easy-to-use, flexible and effective methods of storage and distribution of course materials, and created a new paradigm for the use of educational technology. These features, plus the interactive nature of the computer as an educational medium for individualised learning, have attracted educators to develop web-based education systems and to evaluate the effectiveness of their delivery modes (Gray, 1988).

However, although these technologies are very popular and appropriate for many situations, researchers nonetheless have encountered many delivery and pedagogical problems (Keegan, 1988). Earlier technologies, print and post, broadcasting radio and television, audio and videotapes and teleconferencing for example, also encountered problems: the feeling of isolation from the tutor and peers; the lack of tutor support; lack of convenient and effective interaction; lack of strategies for involving learners actively in the programme; inappropriateness

for the delivery of many subject matters; difficulty of use; difficulty of access to appropriate learning resources; slowness of distributing subject material; unfamiliarity with the self-study approach; high delivery or transmission costs; and problems of managing and evaluation of students (Keegan, 1990; Bates, 1995; Jones 1996).

Whilst the early days of distance learning found that these issues were extremely difficult to deal with, Computer-Mediated Communication (CMC) made it much more possible to find solutions. Using CMC in the 1990s, interaction between teachers and students has been established using different forms of computer-based conferencing and students have been able to access a variety of learning resources located in other computers and exchange information with one another (McMillan, 1997). CMC has become more popular with the evolution of the Internet and the World Wide Web.

Today, and perhaps for the first time in history, through telephone lines, local networks or channels, learners at home and universities can easily access instructional materials and databases that contain information in different formats, interact with distant teachers and peers, share knowledge and experience, co-operate with each other in small or large groups and publish information with low-level costs.

Consequently, educational institutions world-wide are in a rush to establish on-line courses and web-based virtual classes to deliver instruction and support students. According to Powell (2001), '66% of the USA's two-year and four-year

post secondary education institutions offered web-based courses, and another 20% planned to start offering such courses by 2001' (Powell 2001: 43). Higher education institutions are also placing course materials online to supplement classroom situations or replace classroom instruction to meet student and society needs (Janicki and Liegle, 2001).

China is also building an Information Technology (IT) infrastructure to capitalise on the potential of web-based learning. This networking infrastructure is based on a 2.5 Gbps backbone providing network access to some 700 universities with an estimated networking population approaching 5 million. Network connection is also provided to other organisations in China associated with education and research and external network links are provided to Hong Kong, Germany, the US, Canada and the UK. China has recently moved to second place behind the United States in the number of people with internet access at home and has more than 56 million home users, outstripping its more developed neighbour Japan (Shanghai Reuters, 22/04/02). This combination of educational providers and potential consumers may prove to be the only means of meeting the increasing demand for education and training in China's rapidly expanding economy.

However, although institutions have invested much in developing online environments or using already established commercial platforms, only a few studies have been conducted to investigate the effectiveness of online courses based on empirical data (Jung and Rha, 2000). A review of the literature shows that studies conducted in the area of online education tend to investigate the effectiveness of web-based interaction or Internet conferencing on learning

course content, rather than focusing on the effectiveness of the entire learning environment (Atkinson, 1992; Fulford and Zhang, 1993; Foley and Schack, 1998; Graham and Scarborough, 1999; Harris, 1999). Student achievement is the most common indicator for evaluation of online environments with little attention being given to other indicators or factors (such as student satisfaction), which may influence students' achievement and provide a more comprehensive understanding of the effectiveness of web-based education (Lockee, 1999).

1.2 Statement of the problem

Evaluations of the introduction of new technologies to language learning have frequently given rise to contradictory results. Research in the area of web-based courses have shown that the web represents a means to experiment with new practice with computer mediated communication becoming an integral and necessary part of language learning. As Janicki and Liegle (2001) observed, the web is a relatively new technology and most current offerings of web-based courses are established by individuals who have authoring skills, 'but are not necessarily knowledgeable about educational concepts'. There is little linkage between established pedagogical theory in general and web-based education theory in particular (Jung 2001).

Studies in educational technologies and online learning to date have shown that online learning needs to provide information about students' reactions to both instructional (e.g., interactivity, quality of teaching, quality of resources, etc.) and technical aspects (e.g., speed, ease of use, ease of access, etc.) of the medium and

technology (Fulford and Zhang, 1993; Bates, 1995; Clark, 1994; Thorpe, 1998; Lockee, 1999; Whalen and Wright, 1999; Jung and Rha, 2000). Smith and Dillon (1999) indicated that, in order to understand the complex interactions associated with information and communication technology (ICT)-based teaching and learning, future evaluations of education media should consider the conceptual attributes of the medium, such as types of interaction supported by the medium (one-way/two-way), bandwidth (amount of information that can be sent from one site to another), realism (providing high realistic images and motions and audio-video rather than abstract symbols) and system interface (access to multiple information resources and control branching).

There is a need to conduct further empirical studies investigating online learning, particularly objective evaluations of the effectiveness of the web-based teaching and learning environment, a crucial issue in higher education institutions.

As Powell (2001) found:

> 'despite the established base of online courses, online course design and facilitation is still uncharted territory for many college and university faculty. Many faculty members struggle with how to successfully use the available tools and technologies to organise instructional content into well-crafted teaching systems that support learning' (Powell 2001: 44).

In order to extend the research in the field of web-based teaching, the research problems in this study are formulated as follows:

- The perceptions and practices of overseas students involved in online EFL learning activities are to be investigated to elicit convincing data for evaluation;
- The potential impact of web-based multimedia on EFL students language and culture learning are explored to see to what extent the web-based multimedia can contribute to the EFL language and culture learning;
- Online EFL learning resources, particularly authentic materials, are to be developed so as to facilitate overseas students' cultural insights;
- If possible, cross-cultural communication online is to be probed in order to bridge the gap between overseas students and native English speakers.

1.3 Purpose of the study

This study is to evaluate web-based language and culture learning for practical and academic purposes, to investigate the potential impacts of multimedia on EFL teaching and learning, and to explore the possibility of creating an interactive learning environment via multimedia to raise overseas students' cultural awareness. The creation of the online learning environment is based on the answers to the following questions:

1. What are the characteristics, advantages and limitations of previous language learning technologies?
2. What are the technical features of the Internet?
3. What are the instructional capabilities of the World Wide Web for language and culture learning?

4. What are the essential features of online learning environments?

5. What resources should be provided for web-based language and culture learning environments to serve these features?

6. What online model is most appropriate to develop the overseas students' language and culture learning environment?

7. How can an online learning environment be structured and organised for the benefit of EFL language and culture learning?

This study was mainly based on the theory of constructivism (see Chapter 4) with reference to Henderson's (1996) Multiple Cultural Pedagogic Model of interactive multimedia instructional design, emphasizing:

- Pedagogical Philosophy (Instructivism vs. Constructivist)
- Goal Orientation (Sharply focused vs. Unfocused)
- Cooperative Learning (Unsupported vs. Integral).

Simultaneously, Collis' (1999) design guidelines for culture-related flexibility in WWW-based course-support sites was taken into account:

- Use the course-support site to supplement study materials and to integrate and manage student study activities;
- Design the WWW site so that students and instructors can input and make use of a variety of combinations of supplementary media and resources;

- Design for organizational flexibility: so that courses of different lengths, offered at a variety of times and with different types and levels of prerequisites and examination/assessment requirements can be supported.

1.4 Significance of the study

This study may contribute to the field of web-based language and culture learning as follows:

1. Understanding how EFL students learn the target culture via web-based multimedia may help improve the design of further web-based language and culture learning systems;
2. Providing useful information for policy makers and educators in planning, designing, organising and evaluating web-based language and culture education;
3. Providing a newly-designed model for developers who may want to develop similar web-based courses;
4. Providing evidence on language and culture education, which suggests that a web-based learning environment is an effective way of imparting essential cultural information for EFL learners.;
5. Showing how marked rhetorical features could be used to raise overseas students' cultural awareness in academic writing;
6. Contributing to promoting research and practice on constructivism in cross-cultural communication.

1.5 Procedures of the study

Based on the research problem and the purpose of the study, as defined above, the following procedures were followed:

1. A theoretical study, in the form of a literature review, was conducted on:

   - Key issues in language technologies, including characteristics, advantages and limitations of previous education technologies, the educational relationship in education systems, theory of development and evaluation of education technologies ;

   - Technical features of the Internet and the World Wide Web, delivering media via the Web and developing for the Web; and

   - Instructional capabilities of the web, models of using the web in education, theories and types of web-based learning, elements of online learning environments and instructional design for the Web.

2. A web-based learning environment was established:

   - Participants, course content, learning objectives, appropriate teaching/learning approach and the technical requirements were defined;

- The elements of the learning environment, including instruction, activities, support utilities, and interaction tools were designed and developed, and
- Developmental testing of the learning environment was conducted.

3. The research instruments were planned, developed and piloted, the sample of study selected and preparation made for implementation.

4. The learning environment was implemented in the second semester of 2001- 2002 and the research instruments administered to collect, analyse and discuss the data of the study.

5. Conclusions were drawn from the study in terms of design, development and practice, which were related directly to EFL language and culture learning in an interactive learning environment via web-based multimedia.

1.6 Delimitation of the study

- The population: The population of this study was limited to non-English major university students in China, and the sample was limited to PhD candidates enrolled in the first year at Harbin Institute for Technology, China.

- The topic of learning: English Campus Culture (10 units) and Contrastive Rhetoric (CR) (5 units).

- Teaching method: A web-based approach was deployed with the topics given.

- The length of the study: a twelve weeks experiment.

- The qualitative analysis was based on a small sample, and the results might not be generalised beyond this population of EFL students.

In this study, an innovative approach to EFL language and culture learning was implemented, and the effects of multimedia technology on language and culture learning were studied within the framework of constructivism. This study introduced a constructivist theoretical perspective in order to understand the way in which language and culture is differentially learned according to the instructional demands of the mode of presentation of information, ranging from the provision of textual information to the demands of sophisticated internet searches. Such an approach, however, requires an understanding of the impact technologies have had in learning in general and in the field of language and culture learning in particular.

CHAPTER TWO

TECHNOLOGY IN LANGUAGE AND CULTURE LEARNING

As the digitisation of society unfolds, today's world has become a wired one, encapsulated by the World Wide Web (UNESCO, 2002). The shift to information-based globalisation has increased the need to deal with large amounts of information and to communicate across languages and cultures. To memorise is less important than to master the skill of searching the web. Students need the ability to respond and adapt to changes rather than just to receive knowledge from books or teachers. Students need to actively interpret and organise the information that is available, fitting it into prior knowledge or revising prior knowledge in the light of what they have learned.

2.1 Early technologies

Over the last 50 years or so each language teaching method has had its own technologies to support it: When language teachers were following the grammar-translation method, they relied on one of the most ubiquitous technologies - the blackboard - a vehicle for the one-way transmission of information that method implied. The blackboard was later supplemented by the overhead projector, which gave teachers the chance to present their lessons with greater clarity, enabling them to prepare visual material in advance, thus saving valuable classroom time as well as bringing the advantages of colour and effective layout,

immediate availability and consequent improvement in classroom control (Downes 1980:129).

In the mid 1960's, three new technological aids came into general use in the classroom to support the audio-lingual/visual language teaching method: the language laboratory, portable tape-recorder and film-strip projector. The audio-lingual language teaching method was based on a behaviourist approach, which held that language was acquired by habit formation. The potential offered to language teaching by tape-recorders was that it was possible to bring native speaking voices into classroom. Tapes could be used with a tape recorder or in a language laboratory. Early audio-visual courses consisted of taped dialogues, accompanied by film-strips which were designed to act as visual cues to elicit responses in the foreign language. The disadvantage of these methods is the emphasis on repetition. Students became better and better at pattern practice but were unable to use the patterns fluently in natural speech situations. Soon it became clear to teachers that the audio-visual approach could only assist in presentation of new materials. More subtle classroom skills were needed for students to assimilate material and use it creatively.

However, these teaching methods did mark the start of the technological age in language teaching and did introduce important new elements emphasising the need for visual presentation and the possibility of eliciting language from visual cues. It placed far more weight on the use of foreign language in the classroom, and the language used was of far greater practicality. The audio-visual lab was a great advance over the blackboard and overhead projector in that the visual clues

made learning materials live, vivid and true to life. However, it was still a one-way flow of information. Students still passively received what was presented, and, although they might have responded by repeating words and phrases, it was not interactive in an open-ended sense.

2.2 Computer-based technologies

The 1980s and 1990s have seen a shift toward communicative language teaching, which emphasizes student engagement in authentic, meaningful interaction. Audio-visual language labs are gradually being replaced by language media centers, where language learners can use multimedia CD-ROMs and discs, access foreign language documents on the WWW, and communicate with their teachers, fellow classmates, and native speakers (Kern and Warschauer 2000:1). As the Internet has transformed communication around the world, it is natural that it should play a major role in the foreign language classroom (LeLoup: 2000:1). A decade ago, the use of computers in the language classroom was of concern only to a small number of specialists. But now, with the advent of multimedia computing and the Internet, the role of computers in language teaching has become an important issue confronting large numbers of language teachers throughout the world (Warschauer 1998:57).

Since the computer has been applied to language learning, it has gone through the stages of CAI (Computer Assisted Instruction), CALL (computer-assisted language learning), and CMC (Computer-mediated Communication).

2.3 Computer-Assisted Instruction (CAI)

At an early stage, the computer provides materials to study and students can work on drills, tutorials, games, and simulations either by themselves or with classmates in paired work or group work. They can work at a computer during the class, doing assignments, reviewing, or even preparing for the class. Using computers allows students to work at their own pace so that slower workers can catch up and advanced students can do extra assignments. Teachers can use dictionaries, encyclopedias, etc., available on the computer to help them prepare for classes (Kitao 2002). Computers can present materials in various ways with different colours, type faces, and sizes of letters and can present a text sequentially word by word or phrase by phrase etc. They can scroll lines of text up the screen, or change screens on demand or after a set time. Computers are also flexible and untiring and can repeat the same thing again and again without complaining. Whatever it is programmed to do, it can do over and over as often as necessary. They can be used to time the students' work, limit the amount of time allowed to read a passage or do an exercise. Computers can keep records accurately, allowing teachers to keep track of individual or class scores and times, and even statistically analyse individual student and class results.

Although computers can offer much more than blackboard and overhead projectors, as can be seen from the above, because of the limitations of technology, some software is still difficult to use and cannot do exactly what the user wants it to do. Computer programs are not always tailored to a particular user's needs, and so teachers and students cannot get more than what is

programmed. Also, programs do break down which often results in loss of data, and that can make teachers and students frustrated so that they then try to avoid using computers whenever they can.

Apart from technical problems, CAI is also criticized for merely applying outdated pedagogical approaches such as rote practice and drills, based on behaviourist theories that are characterized by the premise that language is essentially a stimulus-response mechanism that can be acquired via memorization and drills. The technology that computers offer should be integrated with sound pedagogic programmes that guarantee a real evolution of the teaching methodologies and procedures. Computer Assisted Language Learning (CALL) came into being to meet this demand.

2.4 Computer Assisted Language Learning (CALL)

Developed from CAI, CALL not only gives instructions but also contains a great variety of exercises for students to practice including grammar, vocabulary, listening and speaking using programmes such as Gapmaster, Matchmaster, Choicemaster, Testmaster, Storyboard, Textmixer, Wordstore and Vocabulary Games. Cloze exercises are typical for CALL which enables a short text to be displayed on the computer screen with words deleted at regular intervals and replaced by numbered blanks. For example, both Clozewriter and Clozemaster allow students to work with many lists of texts, which will help them increase their linguistic knowledge of English. Choicemaster is a package designed for teachers who wish to produce straightforward multiple-choice exercises and tests.

In tutorial mode, the student receives immediate feedback as every question is completed and it offers clues and explanations when wrong answers are selected. In tests, the student is not offered any feedback until the whole exercise has been completed. Multitester is a package containing exercises such as Multiple Choice, Open Answer, True/False, Matching and Cloze. It offers both the tutorial and the authoring versions; and exercises with different levels of difficulty can be chosen. The drawback of these kinds of activities is that some of these tasks are extremely time-consuming so that too much time has been spent on an extremely simple aspect of the language (Domingo, 2002).

CALL listening and speaking exercises have been criticized because they are often still based on drills, rather than being truly interactive. Learners have the possibility of enacting dialogues – generally of the question-answer type – with characters belonging to the programme, but these tend to be closed dialogues; that is, learners cannot ask or answer whatever they want, but have to limit themselves to predetermined texts. However, CALL is considered to be better than CAI in that it offers a variety of forms for students to practise the language, although it still focuses on bits and pieces of language, treating language as a set of prescriptive rules. For example, CALL programmes teach students to distinguish complete from incomplete sentences on the assumption that a complete sentence contains a noun phrase and a verb phrase. But language learning is not a matter of mastering separate rules governing syntax, semantics, phonology and pragmatics: these language systems are inseparable. Language is, by definition, the interaction of rules governing the form, content, and use of language. These systems are not used in isolation and therefore they cannot be

learned separately, so programmes of CALL drills, by their very nature, isolate language learning from natural communicative settings where real speakers and listeners communicate for authentic purposes. Learning how to construct a grammatical sentence, for example, does not help language users select particular conversational settings. These programmes may improve students' knowledge of language, but are unlikely to improve their ability to use language in natural communicative environments. This is a pedagogical conflict that cannot be solved only by technical means. Taking the premise that students learn English in order to build up their communicative abilities (although the cultural element also plays a large part), more emphasis need to be placed on fluency than accuracy activities, on interaction between students rather than on one-way teacher-student traffic (Domingo 2002). Conrad (1996) noted that CALL in the 1980's seemed to be using outdated pedagogical approaches and indicated that a shift was again needed from the use of the computer for drill and tutorial purposes to a medium for extending education beyond the classroom.

Domingo (2002) showed that students became interested in communication only when they realized that they had a real audience. They were being listened to by other people of their own age and were having meaningful communication all the time, since they were not writing in English just to learn how to write, but mainly to communicate with other people. At the same time, the students felt that they were members of a particular social unit in which all the participants were learners of the same foreign language – English. With this feeling in mind, they were progressively creating a shared knowledge for each of the tasks they developed during their debates; and what is more important, they realized they

had a part to play in those tasks. Students felt that they could use the language without too much anxiety about surface errors, and instead focused their attention on higher levels of text structure, such as creating and developing ideas. They had the feeling of being involved in real communication and meaningful use of the language communicating via e-mail. Since language teaching pedagogy has developed into cultivating communicative competence, and the WWW has made online communication possible, CMC came into being.

2.5 Computer Mediated Communication (CMC)

CMC refers to interactive computer messages (e-messages), electronic mail (e-mail), forums, computer conferencing, etc. Among various forms of mediated interpersonal communication, computer-mediated communication (CMC) through international networks has been extensively applied at institutions of higher education in many parts of the world (Ma 1996:174). To the extent that it is possible, students can work with authentic language materials and verify their comprehension through testing and feedback. They can use the language as much as possible, inside and outside of class, through writing and speaking. They can interact with one another, use the language for real communication instead of just in staged classroom scenarios, and learn from one another. CMC, as an effective and efficient means of learning a language based on human interaction, can provide students with opportunities to use the language in real situations (Goodwin-Jones, 1998).

CMC allows language learners with network access to communicate in either asynchronous or synchronous modes, using tools such as e-mail, which allows each participant to compose messages whenever they choose, or e-list, which allows individuals all around the world to have simultaneous conversations. CMC permits not only one-to-one communication, but also one-to-many communication. It therefore allows a teacher or student to share a message with a small group, the whole class, a partner class, or an international discussion list involving many people. Participants can share brief messages as well as lengthy documents, thus facilitating collaborative reading and writing. The fact that computer-mediated communication occurs in a written, electronically-archived form gives students additional opportunities to plan their discourse and to notice and reflect on language use in the messages they compose and read (Kern and Warschauer 2000:1).

Computer-mediated communication combines several features that together make it a powerful new medium of human interaction. Specifically, the online environment allows interaction to be text-based, and time- and place-independent. Text-based interaction brings into one medium the two main functions of language: that it allows us: (1) to interact communicatively and (2) to interpret experience by organizing it into meaning (Halliday, 1993: 95). Historically, the interactive role has principally been fulfilled by speech, whereas the permanence of written texts has made them better vehicles for interpretation and reflection (Bruner, 1973). Writing could be accessed and analyzed again and again by different people at different times. Print extended this advantage to limitless numbers of people around the globe. This is why the development of

writing, and later print, are viewed as having fostered revolutions in the production of knowledge and cognition (Harnad, 1991). What is more, this computer-mediated form is easily transmitted, stored, archived, re-evaluated, edited, and rewritten (Davis & Thiede, 2000; Pellettieri, 2000). The opportunities to freeze a single frame and focus attention on it are thus multiplied greatly (Warschauer 1999). Combined with the time- and place-independent attributes of e-mail, this creates an unparalleled opportunity for grassroots global interaction.

2.5.1 Interactivity and CMC

The concept of interactivity, which is central to CMC, is grounded in communication theory (Belanger & Jordan 2000:21). Media Richness and Social Presence Theories were later proposed to explain the relative richness of communication media in supporting interactions between individuals (Daft and Lengel 1986; Walther, 1992; Walther, Anderson and Park 1994). The basic premise of the theories is that each medium is said to have some interactive communication properties that make it better (or worse) at supporting certain types of communication between individuals (Belanger & Jordan 2000:21).

Interactivity is defined as "the degree to which participants in a communication process have control over, and can exchange roles in, their mutual discourse" (Williams, Rice, & Rogers, 1988:10). Others, such as Tannenbaum (1988), define interactivity as the "process of engagement between two communicators in which each causes change and reactions in the other" (Belanger & Jordan

2000:22). Good learning is collaborative and social, not competitive and isolated, and working with others often increases involvement in learning. Sharing one's ideas and responding to others' improves thinking and deepens understanding (Chickering & Ehrman 2001). Emphasizing the social aspect of language acquisition, the sociocognitive approach claims that students need to be given maximum opportunity for authentic social interaction, not only to provide comprehensible input but also to give students practice in the kinds of communication they will later engage in outside the classroom (Warschauer 2000:2).

Interaction with peers is seen as an essential element in learning and plays a central role in language learning within various cultural contexts (Crago 1992). Computer-mediated communication capitalises on this because it combines features which make it a powerful new medium of interaction in the classroom (Kern & Warschauer 2000). In this kind of communication, the interactive and reflective aspects of language merge in a single medium. Specifically, the online environment allows text-based interaction that incorporates and records for future reflection, within one mode, the two functions of language use, the experiential and interpersonal (Warschauer, 1997). If language learners are engaging in network-based exchanges to communicate their understanding of content, learners are learning a language, learning about the language, and learning through the language about the world (Hasan & Williams, 1996). Laurillard, for example, believes that technologies have a rightful place in higher education if they incorporate a critical dialogic element (Laurillard,1998). The increasing recognition of the place of dialogue arises from recent theoretical perspectives

within the general literature on educational knowledge (Kafai & Resnick, 1996) which believes that all learning is fundamentally a social process, the result of interaction between two or more individuals and their contexts (Sengupta, 2001:2).

Researchers looking at peer response through networked computers, especially in writing classrooms, have reported that Web-based interaction is easier than face-to-face, with more participation, and more feedback, leading students to gradual increases in confidence (Braine & Yorozu, 1998; Curtis & Roskham, 1999; Davis & Thiede, 2000; Kivella, 1996; Mabrito, 1991). A typical feature of the Web experience seems to be the greater quantity of language used in interaction (Ortega, 1997). Researchers who have compared small group interactions in the oral and network-based modes (Sullivan & Pratt, 1996; Warschauer, 1996) provide evidence of increased participation in electronic classroom discussions. This increase may lead to a more informed understanding of language use in real-life communication (Sengupta, 2001:3).

While text-based and computer-mediated communication is magnified more by other attributes (e.g. many-to-many or place-independent communication) even when used for one-to-one communication in the same classroom it has proved of value. Kroonenberg (1994) indicated that the synchronous communication allows students to get practice at fast interaction and when students do need to pause and pay closer attention, the text-based mode allows them to do that, thus creating opportunity for more reflection in the midst of interaction. Kroonenberg also finds that many students are more expressive in this mode than in written

composition (where every sentence weighs heavily on their minds) or in oral conversation (which deters shy students). When oral discussion follows these online chats, the quality of the arguments is enhanced and thinking is more creative than without this kind of preparation and interest in listening is augmented as well (Kroonenberg 1995). The online chats thus serve the role of thinking devices that Lotman suggested are important for collaborative construction of knowledge (Lotman 1988: 39).

Interactivity is a key element of learning environments (Belanger & Jordan 2000:14) and the co-operative model of learning actually assumes that interaction between a learner and other learners is the way learning is promoted (Slavin 1990). The ability to interact via CMC communication elements allows language learners to explore, discover, ponder, search, question, answer and receive feedback (Brett, 2001). Interaction with the computer also decreases the sense of isolation of individuals involved in distance courses, increases the flexibility of individuals to adapt to new conditions, and increases the variety of experiences individual learners are exposed to, such as multicultural environments, broader age range of learners, or greater overall expertise of all learners combined (Belanger & Jordan 2000:21).

2.5.2 Media Richness and Social Presence

Proponents of CMC advocate that CMC offers a solution to the constraints posed by time and space on geographically dispersed organizations seeking to communicate with each other. Computer networks connecting campuses in

different countries provide students with an opportunity to communicate with their culturally dissimilar counterparts (Ma 1996:174). But opponents of CMC argue that CMC is not as effective as FTF (face-to-face) communication and their argument is based on both the media richness theory and social presence theory (Scott 2001).

Media richness theory represented by researchers Daft and Lengel (1984) proposes that communication media have varying capacities for resolving ambiguity, negotiating varying interpretations and facilitating understanding. Using four criteria, these researchers present a media richness hierarchy, arranged from high to low degrees of richness, to illustrate the capacity of media types to process communication. The criteria are (a) the availability of instant feedback; (b) the capacity of the medium to transmit multiple cues such as body language, voice tone, and inflection; (c) the use of natural language; and (d) the personal focus of the medium. FTF communication is the richest communication medium in the hierarchy followed by telephone, electronic mail, letter, note, memo, special report, and finally, flier and bulletin (Scott 2001). The media richness theory suggests that effective teachers make rational choices matching a particular medium to a specific task or objective and to the degree of richness required by that task.

Social presence theory also contends that a continuum of degrees applies, this time to the degree to which the medium facilitates awareness of the interpersonal relationships during the communication exchange. FTF message exchange contains the greatest social presence, followed by audio plus video, audio-only,

and print (Short, Williams, & Christie, 1976). In comparison to FTF communication, CMC is expected to be extremely low in social presence and is perceived to be a very "lean" channel, due to its lack of non-verbal cues. Overall, CMC is regarded as being more impersonal than FTF communication. However, when placed in the context of global communication, CMC shows an obvious advantage over FTF communication as is evidenced by Table 2.1.

Table 2.1: Array of media types used divided into geographic categories (Source: New Communication Technologies in the Workplace, Scott, 2001)

Media type	Local	International
Face-to-face	1st choice	4th choice
Telephone	2nd choice	2nd choice
E-mail	3rd choice	1st choice
Letter	4th choice	3rd choice

If conditions permit (e.g. native-speaker teachers always around in the class), FTF has the advantage with facial clues or tones and body language. But when it is a matter of mass communication all over the world, it is impossible or too expensive at the moment to achieve non-verbal cues through a computer and the "two-way exchange" and "context", which CMC can offer, comes to prominence. The function of "two-way exchange" and "context" in CMC to a certain extent supplements the characteristics lost in face-to-face communication.

2.6 Web-based multimedia

Web-based multimedia extends the capabilities of CMC by providing links to the vast store of information that forms the World Wide Web (WWW), which came into being on the hypertext wave of the mid eighties and was rapidly transformed into a hypermedia environment.

2.6.1 Hypertext

Hypertext offered a new type of software technology and the related conception of how information space should be structured with highly flexible access and navigation. Essentially, any item in a database could be linked to an associated item enabling the user to peruse the database following a dynamic association of ideas (Boyle 1997:14). Traditional modes of organising information have a strong linear element – stories, books and video, but the idea of a hyperstructured information space was to replace linear structures with a network of nodes of information. The user would have considerable freedom of access to individual nodes and to traverse between them and could thus structure the information access that suited their needs at a particular time. Hypertext was soon reinforced by developments in multimedia with hypertext rapidly moving into hypermedia, where nodes of information may be of any media type.

2.6.2 Hypermedia and the WWW

The WWW acts like a global, distributed hypermedia system. It provides a standard for structuring applications as hypertext documents that can be "published" on the Internet. For users the web application is presented as a standard hypertext document on the screen and clicking on a link in that document can cause retrieval of material held on a local hard disk or on a computer half way round the world. The hypertext link allows anything on one page to link to any other page in the WWW, and the ability to combine objects of many different media types makes the web page an excellent format for mixed media. The multimedia nature of the web and the use of the web page as an interface to other services have greatly expanded the power of the Internet by making it possible to display information using a combination of formats (Fidelman, 1996). This is essential for the delivery of authentic language materials, including texts, images, sound recordings, video clips, virtual reality worlds, and dynamic, interactive presentations (LeLoup et al 2000:1). This capacity impacts on learning, with the integration of multiple modes of learning and learner exploration. It is easy with hypertext links to incorporate multiple data types or media (images, graphics, text, video clips, audio clips, and animated images) in the course material. Using different media promotes the use of multiple stimuli for learners to absorb the material. While print also has some graphical features, the ability to include a broad range of media is greatly expanded on the web, thus potentially challenging the textual emphasis of print literacy.

The emphasis on multimedia was not a new development but stemmed from a century of changes in mass media, including the invention and diffusion of radio, film, and television, which had drastically altered patterns of information exchange and entertainment in the 20th century. Digital multimedia simply pulls these together to provide a uniform viewing platform in the form of web browsers. Though the development of multimedia has no doubt influenced print media, it is in the computer-based WWW that the integration of text and audiovisual material is most complete, with the processes of reading and writing transformed into multimedia interpretation and authoring (Warschauer 1999).

2.6.3 Hypermedia, the WWW and language learning

Web-based multimedia allows a powerful extension of the computer as a tool, in that it can now provide an authentic context of the target culture by facilitating access to information and data. The WWW offers an abundance of informational resources whose utility for language learning is just beginning to be tapped. Using the WWW, students can search and locate and access authentic materials (e.g., newspaper and magazine articles, radio broadcasts, short videos, movie reviews, book excerpts) that correspond to their own personal interests. They can also put their own ideas onto the web to share with their peers or with the general public. These features can facilitate an approach to using technology in which authentic and creative communication is integrated into all aspects of the course (Kern 2000). The very existence of networked computers creates possibilities for new kinds of communication. This is particularly important in English language teaching, since so much international online communication is conducted in that

language. Teachers of English can gain access to the enormous variety of authentic materials relating to all spheres of life (Krajka 1998).

An appropriate pedagogy for networked multimedia must take a broad view, not only examining the role of information technology in language and culture learning, but also the role of language and culture learning in the information technology society. As Kern has pointed out that

> "If our goal is to help students enter into new authentic discourse communities, and if those discourse communities are increasingly located online, then it seems appropriate to incorporate online activities for their social utility as well as for their perceived particular pedagogical value" (Kern 2000:1).

Current advances in computer technology and the rapid pace of change in the communications revolution are affecting the way English language teachers use information technology to develop students' language skills. There is now a wide range of opportunities open to classroom practitioners from creating online self-access quizzes to the use of authentic online materials as input for activities, and for promoting collaborative projects through multimedia (Hegelheimer, Mills, Salzmann and Shetzer 1996). Furthermore, various functions of the Internet appeal to different learners' styles. For example, students who are motivated by working independently, or who are visual learners, might benefit more from using the WWW for resources of various media, while students who like to interact and work in collaboration with others would more likely benefit from online communication.

On the web, students can browse through interdisciplinary resources. These resources include electronic articles and books, virtual encyclopedias, news groups, e-mail exchanges, listserv discussion groups, on-line conference forums, and many other cultural expressions. With its digital linkage of images, sounds, texts, and up-to-date archive materials the WWW can create entirely new educational domains because it is multimedia by design and interactive by nature. WWW browsers function as gateways to this interdisciplinary universe. They immerse language students in multi-sensory learning environments that extend far beyond the walls of traditional classrooms. The WWW can gradually help language learners become informed cultural observers by this virtual immersion in the target culture.

Web-based multimedia is built on the basic modes of communication that are central to CMC, so that students and teachers can use these facilities to communicate with individuals and groups, and even talk in real time. They can also retrieve information and resources from the WWW, which acts as an almost limitless resource library (Warschauer, 1995). The emphasis is on people working together in collaboration rather than in competition with each other. Internet users can become information providers by storing information on web pages that are easily accessible by others, or participants in online discussion lists to share information and ideas with each other. This may be seen as a shift from a teaching environment to a learning environment in which students are taught through the WWW "to become lifelong learners by helping them locate the resources to continue learning outside the classroom" (Berge & Collins, 1995). By helping each other, students also expand their own realm of knowledge in the

process. Overall, the WWW promotes philosophies of shared resources and knowledge, plus active involvement in the learning process. Indeed, this rich resource lends itself naturally to being an effective teaching and learning tool for the student-centred, communicative and collaborative EFL classroom.

The WWW offers opportunities for interactivity, especially with students in other parts of the world, which results in increased cultural awareness. As Vilmi (1995) suggested that the students learn an enormous amount content-wise and culture-wise, as well as language-wise knowledge, plus they all learn how to use new technology.

Accessing and using WWW pages in language education supports a sociocognitive approach by helping immerse students in discourses that extend well beyond the classroom, their immediate communities, and their language textbook. This is particularly crucial for foreign language students who otherwise experience the target culture only through their instructor and select curricula. Students can use web pages as authentic materials for conducting research on culture and current events (Osuna & Meskill, 1998). Also, in searching for and retrieving information from the Internet, students have greater interaction with the course materials, providing them with a sense of ownership (Shetzer 1995), as well as enjoyment of the course content (Opp-Beckman 1995).

2.6.4 Language learning and searching the WWW

The Internet has brought about "the fourth revolution in the means of production of knowledge," on a par with the "three prior revolutions in the evolution of human communication and cognition: language, writing and print" (Harnad, 1991:1). Since the WWW offers such a vast array of resources, it is important to inculcate appropriate searching skills to enable teachers and students to find suitable authentic materials on the Web. The most-frequently used method to find such is to use a search engine, which is a mechanism that ranks relevant sites based on the link structure of the WWW (University of Wisconsin-Stout, 2001; LeLoup, Ponterio, Cortland, and Fleteach 2000). Key words are typed in and the search engine starts to search for the relevant information in the Web according to the proximity of the terms and then displays the search results. By searching the web, students can find useful information on their own, and no longer need to rely on materials from teachers. It also helps students to think analytically (Pow 1999: 82-3), because they have to decide which search terms to use, and then decide what information is relevant. In addition, it is also helpful for teachers to conduct the searches for relevant materials, resulting in links to appropriate materials that meet the teacher's objectives and save students' time.

Information dissemination and retrieval can be integrated into wider educational activities (Boyle 1997:23). One possibility is for individual students to search for materials before class, and come to the class meeting to share the results of their search, and to compare and discuss it with other students. This kind of activity gives an opportunity for the students to be active in their search and to fetch

documents that they find interesting. This approach makes the activities lively and gives that sense of realism that is a primary objective in the reform of language teaching. The students take an active part in their learning and practice, setting goals for themselves and structuring their research on their own, and because the source and the environment are in English, they don't feel the need to go back to their own mother tongue, instead, functioning directly in English. This approach allows students to engage in communication and interact in English with anyone connected to the Internet and interested in a particular topic. Once given access to this medium, the students do not need assignments to communicate and write in English; they go and do it on their own, which is good sign of active learning (Gauthier 2001:3).

During the process, students experiment with various keywords and combinations to find the ideal combinations of keywords to obtain more precise and targeted results. Frequent "net surfers", for example, become "experts" at using web-based search engines (Belanger 2000:26). Students get to know how to use different search engines; which servers present relevant information more quickly; how not to waste time in searching for information on the web. They also become familiar with other research and communication tools on the Internet (Gauthier 2001:9).

2.6.5 Studies of Web-based multimedia language teaching and learning

Wong's study integrated web-based multimedia into a Level One ESL course of Academic English Reading and Writing for Non-native Speakers at St. Louis

Community College. The class was conducted as a reading and writing workshop in which students learned cooperatively as readers and writers. Class activities included reading, journal sharing, discussions of the texts, in-class writing, peer review, peer editing, and teacher-student conferences. The class was carried out at The Information Systems Department computer lab. The students were guided to browse the WWW and to locate information. The procedures included opening and using Netscape Navigator, browsing the Southeast Missouri State University's Homepage, and searching information with an Internet search engine. After class, each student wrote a report responding to the information they found from the web and to the experience of searching the web. The results showed that all students found the experience exciting and meaningful. Students were impressed by the huge information resource that they could easily access and liked the idea of reading information that interested them. They indicated that the reading was meaningful to them and in their written reports everyone in the experimental group liked the experience of browsing and reading information on the web and reported that it was a good authentic reading and writing activity (Wong, 2002).

Osuna & Meskill (1998) conducted a pilot study using the WWW to integrate Spanish language and culture. Thirteen undergraduate students were involved, who did five task activities. Each task required the students access one specified website. After completing each of the five language and culture activities, the students completed a post-activity questionnaire, with an additional survey at the end of the term that queried their reactions to the activities as a whole. Eighty-eight percent of the subjects reported increased knowledge of Spanish language

and culture. This finding is encouraging because all activities exhibited a high percentage of subjects identifying increased knowledge of language integrated with culture (i.e., from 85% to 100%). In order to identify if either factor had a greater effect on learning, culture and language outcomes were measured separately. Results for culture learning separated from language learning were also very positive. Eighty-one percent of the subjects reported that cultural learning was occurring. When subjects were asked about learning language separated from culture, 77% reported gains.

Table 2.2 Perceived Learning Outcomes (source: Osuna 1998. Pilot Study of using WWW to integrate Spanish Language and Culture).

	Activity 1	Activity 2	Activity 3	Activity 4	Activity 5	Mean
Language knowledge increased	62%	69%	77%	77%	100%	77%
Cultural knowledge increased	85%	69%	77%	62%	100%	81%
Knowledge of language and culture together increased	100%	85%	85%	85%	85%	87%

When asked if they felt they had learned more Spanish by doing the web activities, the entire group (100%) agreed. All subjects also recognised the web as a valuable learning tool offering up-to-date information in comparison with printed resources.

The tasks successfully served as a means of broadening the students' learning experience and connection to target cultures. This finding strengthens the importance of teaching language and culture in context, a point that cannot be

overemphasized. Data from this small-scale pilot study demonstrate that if students studying foreign language are to become successful learners, integration of language and culture may be pivotal (Osuna & Meskill 1998). All subjects saw the web as a valuable learning tool that offered current information; they commented positively about web information being current, interesting, varied, and useful in real life. The web engages multiple modalities through combined text, sound, and visuals and subjects specifically referred to enjoyment of the visual element. Osuna and Meskill maintain that engagement with visuals brought about positive attitudes about cultural learning, and that in authentic settings, culture and language are complementary components of communication. One without the other will always be deficient (Osuna & Meskill 1998). These results affirm the value of the medium as a tool for foreign language and cultural learning. Technology seems to be especially beneficial in promoting cultural learning, according to the participants, who indicated several advantages of the Internet over other media and instructional tools: it is informative; "a great way of learning a lot about a foreign place"; "it is interesting." According to Osuna, these responses should signal to foreign and second language professionals that the easily accessible and varied resources of the WWW have enormous potential for supporting the integration of culture in the foreign language curriculum.

The study mentioned above is a good example of how web-based telecommunications open the way for interactions based on real needs and a genuine desire to exchange information that approximates more closely to the normal uses of language, enabling learners to reach out and communicate to native speakers of the target language. "From a language and culture learning

point of view, the contribution of the WWW lies primarily in increased exposure to the target language and improved opportunities of engaging in meaningful interactions with a high degree of authenticity" (Kenning 1998:3).

The evolution of CALL into a methodology that incorporates CMC and web-based multi-media has been described by Cunningham (2000) who has devised a scheme of classification for the various components (Table 2.3). Cunningham used this classification to design a system of computers running a variety of programs that aimed to present the various aspects of the expanded view of CALL to students. Each work station had a complete set of simple instructions and parameters set for the students to follow. Working in groups or individually, and within the time constraints, the students were free to explore and work through the various assignments supplied by the respective software.

Table 2.3 Types of programs presented in Cunningham's expanded version of CALL (Cunningham, 2000)

General Category	Sub-category
Tools	Text processors Voice processing programs Communications programs
Instructional Programs	Drills and practice Tutorials Exploratory programs Simulations games hypermedia
Databases	Information sources Databases Text corpuses Hypermedia
Testing Programs	Computer based language tests, including adaptive tests

A total of thirty-seven EFL learners enrolled in writing classes completed survey questionnaires eliciting their attitudes toward their experience in the computer-assisted classroom. The results showed that 88% of the students believed the computer helped them to improve their writing skills (Cunningham 2000).

However, the fact that students or teachers believe that new methods have an impact on performance does not necessarily mean that demonstrable increases in performance are shown in comparative studies (see, for example, Russell, 1999). The purpose of the present study is to investigate the claims made for the expanded version of CALL described by Cunningham, in terms of measurable performance outcomes. In particular, the study uses a theoretical basis of constructivism to solve the problems associated with culture specific aspects in language learning.

CHAPTER THREE

THEORETICAL BASES FOR THE RESEARCH

This chapter describes the relationship between language and culture, which are interwoven and interdependent and explores the necessity and feasibility of integrating language learning with culture learning. Contrastive rhetoric is used to identify Chinese students' barriers in academic essay writing which is structurally different from that of the native speakers'. A proposal for removing these cultural barriers by creating a multimedia interactive learning environment is based on constructivist theory, which describes the process by which individuals construct mental models that ground their understanding in a deeply personal and unique fashion.

3.1 Language and Culture: Cultural Adaptation

Language cannot be separated from the culture it is rooted. Lack of cultural knowledge may result in communication failure even though the speaker is apparently fluent in the language. This raises the question: can a speaker of a foreign language be a good communicator without the target cultural knowledge? For example, to communicate with a shop-assistant in a shop, it is acceptable to say "Hi" in China, but words or phrases such as "Excuse me", "Please" and "Thanks" are more often used in the UK. To understand the phenomenon of cultural elements in communication when learning the language, it is necessary to make clear the interdependent relationship between language and culture. It is

necessary to establish the function of "language" and what is meant by "culture" in a broad sense, and what aspects of culture are dealt with in this study in a more specific sense.

3.1.1 The Relationship between language and culture

"Language is a system of arbitrary, vocal symbols which permit all people in a given culture, or other people who have learned the system of that culture, to communicate or to interact" (Feng 1999: 67). As a set of symbols, language is shared by a community to communicate meaning and experience. "Language bonds a people together and reflects what those people see and think" (Jandt 2001:126). Language constitutes material objects and social practices as meaningful and intelligible. It structures which meanings can or cannot be deployed under determinate circumstances by speaking subjects. In this sense, to understand culture is to explore how meaning is produced symbolically through the signifying practices of language within material and institutional contexts. Indeed, the currently ascendant strand of cultural studies holds the field to be centrally concerned with language as the signifying practice of representation (Barker & Galasinski 2001:4).

As language is the symbolic representation of people, and it comprises their historical and cultural backgrounds as well as their approach to life and their ways of living and thinking (Deng & Liu 1989:3), language mirrors its corresponding culture. Those aspects of the culture important to the members of a social community are correspondingly highlighted in the language. When a

community focuses its attention on a particular topic, it produces words to designate its specific language or terminology (Wu 1999) and language can be regarded as the outlet of its culture.

Also, language provides a screen or filter to reality: it determines how speakers perceive and organise the world around them, both the natural world and the social world. Language helps people form a habitual thinking model, by which the language users tend to distinguish categories out of experiences. In cross-cultural communication, the vocabulary of one language will greatly influence the perceptive ability of speakers of another language. If one language makes distinctions that another does not make, then those who use the first language will more readily perceive the differences in their environment which such linguistic distinctions draw attention to.

Language and culture are inseparable from each other but neither linguistic determinism nor cultural determinism can adequately explain why a language should select its unique system of signs, for these selections are made partly in response to cultural needs and partly owing to the inherent arbitrariness of the process. Language is not simply a passive reflector of culture. Even assuming that culture is in many cases the first cause in the language-culture relationship, language as the effect in the first link of the causal chain will in turn be the cause in the next link, reinforcing and preserving beliefs and customs and conditioning their future course (Wu 1999). Language is not a culture-free code, distinct from the way people think and behave, but rather, it plays a major role in the perpetuation of culture (Kramsch 1998:8).

From a discourse or anthropological perspective, language structures, as they are used in communicative situations, are embedded in the whole social and historical context of culture; they are but one system of signs among many that people use to give meaning to their environment (Kramsch & Andersen 1999). From a sociolinguistic point of view, language is not merely a formal system of sounds, words and syntactic structures, it is also a social phenomenon. It cannot exist in vacuum and must be associated closely with all social factors. As human society is in fact a cultural system, culture is the basis on which human society exists and develops, and language is one of the major elements to form the system. Cultural patterns, customs and ways of life are expressed in language. Language is, in turn, a tool which people use to think, express their ideas, pass on knowledge and experience. In this way, language reflects the character of a nation including its historical and cultural background. Without language, culture cannot exist. On the other hand, language is influenced and shaped by culture. With the development of a society, language develops at the same time, e.g. new words appear, grammar changes, etc.

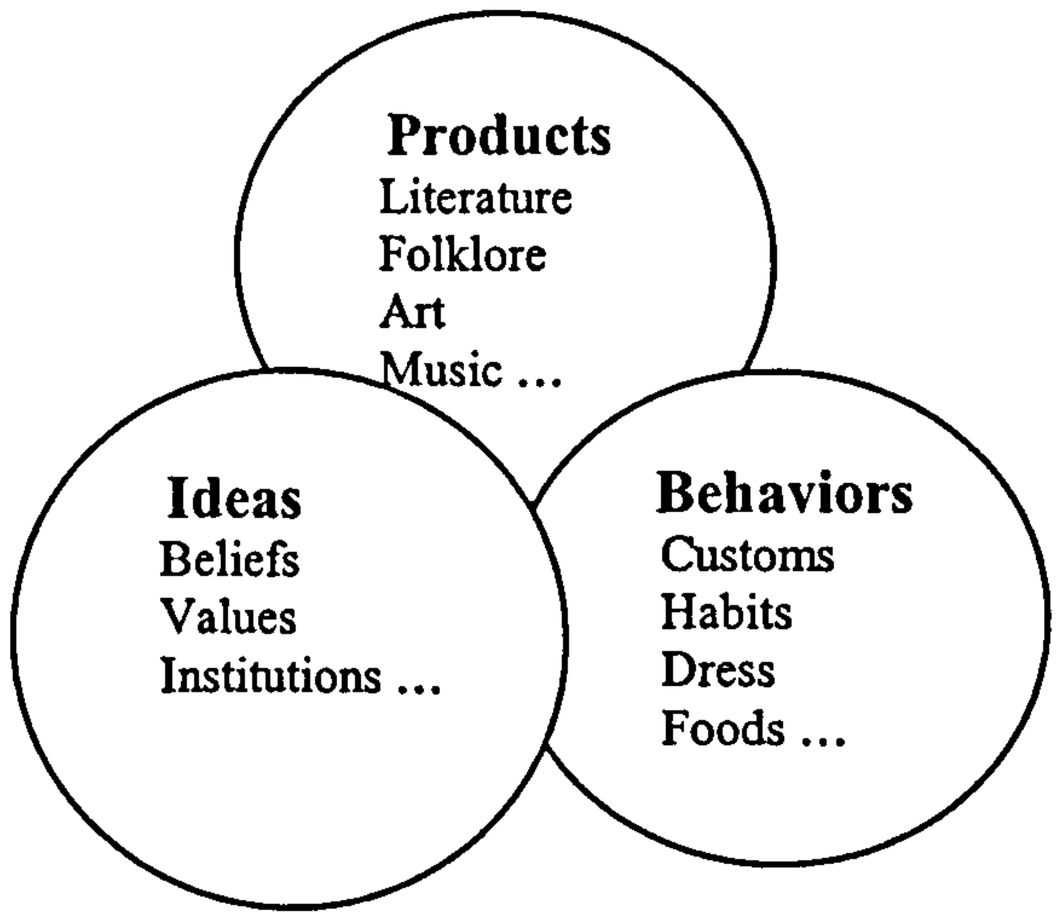
Compared with language, culture is even harder to define, as Raymond Williams (1983) declared that "One of the two or three most complicated words in the English language is *culture*". After having reviewed 164 definitions of culture, Kroeber and Kluckholm still did not find a satisfactory definition (Kroeber and Kluckholm 1952, quoted by Edelstein 1989; Brislin 1981; Feng 1999; Chesebro 1998). Since 1952, the number of definitions of culture has increased dramatically (Chesebro 1998:181). No wonder Scollon (1999) claimed that "the word *culture* brings up more problems than it solves" (Scollon 1999:125).

To make complicated things simple, the realistic way in this study perhaps is not to pursue the question "What is culture?" but rather to ask for what purpose culture is being talked about so as to concentrate on the relevant aspects (the campus culture in the UK in this case). Based on this principle, the following meanings of "culture" are selected.

Among many classifications of culture, the most commonly accepted one is capital letter *C* and small letter *c* (Stempleski 2002; Prevos 1999; Feng 1999). Capital letter *C* refers to elements of achievement culture -- history, geography, institutions, literature, art, and music – and the way of life. The subject itself has broadened to include culturally-influenced beliefs and perceptions, especially as expressed through language. Capital *C* is also called "formal culture".

The small letter *c* comes from Gail Robinson (1985), an American researcher in the area of cross-cultural education, who reported that when teachers were asked "What does culture mean to you?", the most common responses fell into three interrelated categories: products, ideas, and behaviours which can be expressed through the following diagram

Figure 3.1 Cross-cultural understandings



(Robinson 1985. Cross-cultural understandings)

The culturally-influenced behaviours which constitute little *c* culture have tended to be treated in an anecdotal, peripheral, or supplementary way. Culture with a little *c* is also called "deep culture". Capital letter *C* and small letter *c* have led to the definition of culture as value systems, habits of thought, assumptions about reality, verifiable knowledge, art forms, language, paralanguage and kinesics (Nostrand 1978, quoted by Stern 1992: 209).

Parallel to capital letter *C* and small letter *c*, another influential classification of culture is *High* culture and *Low* culture (Scollon 1999:126; Murray 1995). *High* culture focuses on intellectual and artistic achievements. One might speak of a city as having a great deal of culture because there are many art exhibits, concert performances, and public lectures. Or one might speak of a particular period in history, such as the Elizabethan period (1558-1603) of England, as a high point in English culture because of the great number of musicians and poets of that

time whose works we still revere. The Tang period (618-907 AD) in Chinese history is generally regarded as a period of high culture as well. *Low* culture refers to anthropological culture. In contrast with the culture which is found only in cultured circles, the *low* culture, in the sense of anthropology, is something that everybody has. It includes any aspect of the ideas, communications, customs, worldview, language, kinship system, social organisation, and other taken-for-granted day-to-day practices of a group of people which gives to them a distinctive identity and which is used to organise their internal sense of cohesion and membership (Scollon 1999:127; Hudson 1999:70). It is the whole way of life of a people or group (Montgomery and Reid-Thomas 1994:5).

Similar to the two pairs mentioned above, another classification is *Achievement* culture and *Behavioural* culture: *Achievement* culture (or accomplishment culture) refers to artistic and literary accomplishment; while *Behavioural* culture (taking largely from Nostrand (1974) and from Seelye's (1974) principle of physical and psychological needs), is defined as typical 'actual behaviour plus attitudes, values, etc.' If culture is describable as a behavioural framework, then cultural sensitivity and cultural literacy would require a more-than-superficial familiarity with an array of such frameworks.

The definitions and classifications of culture mentioned above are by no means exclusive. They are chosen here based on the two considerations: 1. To single out among all of the many aspects of cultural description just those factors which have been clearly shown to affect language learning and cross-cultural communication; 2. To "focus on what we think are the most crucial few

dimensions of culture and on aspects of intercultural communication which have proven to be recurring problems in global communication" (Scollon 1999:126).

Within the scope of this study, practical cultural barriers to be discussed in Chapter 5 mainly arise from small letter *c* culture, *anthropological* culture and *behavioural* culture, for example, the behaviours and ideas of the people in small letter *c*, the customs of everyday life in anthropological culture and behaviours, attitudes and values in behaviour culture. It is these aspects of culture that need to be added to foreign language learning and it is these aspects of culture that have a direct effect on cross-cultural communication. Since the barriers are not coming from the language or culture individually, but from the influence of language on culture and vice versa, the interrelationship between language and culture needs to be further discussed.

Halliday (1993) states that "Language neither drives culture nor is driven by it…given that language and culture evolve together in this kind of relationship, it is inevitable that language will take on an ideological role" (Halliday 1993:11). Kramsch (1998) further explained the function of language on culture from the following three aspects:

Language expresses cultural reality

To begin with, the words people utter refer to common experience. They express facts, ideas or events that are communicable because they refer to a stock of knowledge about the world that other people share. Words also reflect their

speaker/author's attitudes and beliefs, their point of view, that are also those of others. In both cases, language expresses cultural reality.

In other words, "to learn a foreign language is not only to exchange words with people who speak that language but actually to understand what they mean" (Kramsch 1993:34). Native speakers of a language speak not only with their own individual voices, but through them express also the established knowledge of their native community and society, the stock of metaphors this community lives by, and the categories they use to represent their experience. This makes native speakers' ways of speaking predictable enough to be understood by other native speakers, but it is also what makes it so difficult for non-native speakers because they do not share the native-speaking community's memory and knowledge. Even if they have mastered the forms of the new language, they might still have difficulty in meeting the social expectations of speakers from the new speech community (Kramsch 1993:43).

Language embodies cultural reality

Members of a community do not only express experience, they also create experience through language. They give meaning to it through the medium they choose to communicate with one another. The way in which people use the spoken, written or visual medium itself creates meanings that are understandable to the group they belong to. Through all its verbal and non-verbal aspects, language embodies cultural reality (Kramsch 1998:1). For example, with the emergence of specific vocabulary focused on computers and software, English

words appeared with new meanings such as "superhighway", "mouse", "path" and "chat-room". People from other parts of the world borrow the English words with new meanings and keep using them. In this sense, the shared meanings of culture are not "out there" waiting for people to grasp them. Rather, they are the products of signifying practices, most notably those of language.

Language symbolises cultural reality

Language is a system of signs that is seen as having itself a cultural value. Speakers identify themselves and others through their use of language; they view their language as a symbol of their social identity (Kramsch 1998:1). For example, the word "teacher" in China brings out the images of highly-respected and esteemed profession and "football fans" in the UK a group of enthusiastic sports-lovers in stadiums or pubs with big screens. As culture includes issues of perception, cognition, and understanding, culture is not merely an abstract set of folk practices, nor a collection of tourist festivals. Rather, it is a set of symbolic systems, that serve not only to define and identify the culture and social structures, but also to articulate the synthesis of two essential parts of human culture, ethos and world view (Geertz 1973).

On the whole, "Language is the principal means whereby we conduct our social lives. When it is used in contexts of communication, it is bound up with culture in multiple and complex ways" (Kramsch 2000:3). The fact that no culture can exist without some form of language reflects the close relationship between culture and language (Feng 1999). Language is the means by which culture is

preserved and transmitted. Cultural patterns, customs and ways of life are expressed in language and culture-specific world views are reflected in language. Language cannot exist by isolating itself from culture because, for one thing, every specific language is unique to a specific culture and language always operates in a speech community of the culture. We, as educators and teachers, cannot concentrate solely on the formal components of a language; otherwise we cannot see the wood for the trees.

"Language is not just a neutral tool used to convey information about the world. It is epistemological in that through it the world is arranged. It is ontological in that through it experience is understood. To share a language is to share a network of meaning, and thus to share a world view, a view of the self, and a view of the other" (Scheiderer 2001:1). Language is both an integral part of culture and the indispensable vehicle for its transmission. Certain language choices and patterns can be studied as a reflection and integrating force of a cultural system (Chesebro 1998:181). "One has to understand why they said what they said and how they said it to whom in a specific context of situation. In addition, one has to link their words, beliefs, and mindsets to a language context of culture" (Kramsch 2000:26).

The complex process of learning a foreign language cannot be simplified as consisting of a set of formal steps that can be programmed as sentence pattern drill, pronunciation practice and vocabulary memorisation. Rather, it involves a seemingly infinite number of variables, among which, culture learning is one crucial factor. Chinese students learning English, as well as other ESL/EFL

students, cannot be expected to become truly bilingual without learning or involving themselves in the underlying culture of that language. They have to go deep into the culture, to the place where the language is properly used. The more culturally aware they are, the better they can master the language. Since language and culture are so closely interwoven, it is necessary to raise cultural awareness while learning the language. The next section will discuss cultural awareness in language learning and in cross-cultural communication.

3.1.2 The effects of cultural awareness on language learning

Life in the contemporary world brings people of other languages and cultures into contact and therefore the need to understand a culture other than one's own has become of paramount importance. Otherwise, difficulties may arise in this extensive cross-cultural interaction (Cushner and Brislin 1996:12). To be competent in intercultural communication, individuals have to understand the social customs and social system of the counterpart culture, for understanding how a people think and behave is essential for effective communication. When communicating with people from different cultures, it is necessary to be aware that culture and the proper use of language in communication are strongly connected. The way that people communicate is part of their culture (Jandt 2001:4).

Patterns of everyday interaction are themselves socially conditioned and reflect the larger social matrix (Kane 1990:246). The chance of misunderstanding between members of different cultures increases when this social matrix is

forgotten. It is estimated that more than half of all international joint ventures fail within two or three years. The reason most often given is lack of cultural awareness - not, as often assumed, the lack of technical or professional expertise (Millet 2002). People from great distance such as Western and Asian cultures, in general, have the greatest chance of misunderstanding each other due to their different norms in communication (Jandt 2001). Differences in language styles, patterns of speech, non-verbal cues and cultural values affect people's ability to fully understand one another. The product of a culture's influence, then, is a residue of behaviour, ideas, and beliefs with which people are comfortable and which they consider "proper" or "the right way".

In intercultural contact, however, people interact with others who also consider certain behaviours desirable. Often, the same behaviour is considered desirable to people from one culture but may not be the case to people from the other (Brislin 1981:5). For example, Americans tell each generation always to look forward; while in China, the message is to look to the past for guidance and strength. Americans tell each generation that competition is valuable, while Chinese believe that cooperation is more important than the contest. Americans tell each generation to value youth, but Chinese respect and treasure the experience of older members of the community. Even though there is no "right" or "wrong" in these behaviours, learners still have to be careful, for unfavourable reactions will occur when cultural values are violated or when a culture's expected behaviours are ignored. Culture consists of ideals, values and assumptions about life that are widely shared among people and that guide specific behaviours, and it is created by people, transmitted from generation to generation (Brislin 1993). In any given

culture, a large number of everyday behaviours, traits of people, standards and recommended norms for morality are considered good, proper, or correct. People become very comfortable with these elements of their culture. However, they also become intolerant of people both from within and outside the culture who deviate in some way (Brislin 1981:5).

The way to avoid misunderstanding is to be culturally aware: to know the cultural meanings associated with time, place, person, and circumstance and to know how to use the language in those circumstances (Schneider and Fujishima 1995:3). Successful use of these strategies creates an atmosphere of politeness that enables social transactions to proceed without threat to the face of speaker or hearer (Richards and Sukwiwat 1985:138). "In the cross-cultural context, understanding another's culture can make people more accurate in their interpretations of and attributions about the other people's behaviour" (Cushner and Brislin 1996: 14).

Cultural awareness is the term used to describe sensitivity to the impact of cultural behaviour on language use and communication (Tomalin and Stempleski 1993:5). "To be culturally sensitive is to be aware of the ways in which cultures differ and the effects of these differences. Developing cultural awareness means being aware of members of another cultural group: their behaviour, their expectations, their perspectives and values. It also means attempting to understand their reasons for their actions and beliefs. Ultimately, this needs to be translated into skill in communication across cultures and about cultures" (Grossman 1991, quoted by Cortazzi and Jin 1999:217).

Cultural awareness develops out of and is parallel with awareness of the sociolinguistic dimension of language study and the relationship between language learning and cultural experience is mutually supportive (Byram 1991:14), which has led Kniffka (1992) to suggest that adult foreign language education needs even more expertise in and concern for cultural awareness (Kniffka 1992:75). Over the last decade or so, this need for integration of cultural awareness with language teaching has become widely accepted (Holden 1999:1). However, simply introducing cultural background knowledge is not enough, according to Furstenburg (2001), who advocates a deeper understanding of the skills associated with cultural understanding.

> "Pure information is useful but does not necessarily lead to insight, whereas the development of people's cultural awareness leads to more critical thinking with an understanding of one's own and other communities. This will no doubt be one of the most important skills graduates everywhere will need to possess in this century. So now, more than ever, is the time to search for ways in which this new level of understanding of cultures around the world might be attained" (Furstenberg 2001:2).

As the teaching of languages needs to reflect the reality of the world in which people live, cultural awareness must be developed using appropriate teaching methodologies. One approach is to create a social rehearsal of language use to prepare learners to use the language in real life (Khuwaileh 2000:284).

In this intercultural communication age, language learning consists of not only the learning of language skills but also the awareness of other behaviour patterns

of the target language community. It is not enough that students master grammatical rules and lexical meanings of a language. Only once cultural awareness is added to language learning can appropriate use of the language in the target culture be ensured (Shier 1990:301).

3.1.3 Language learning and culture learning

Teaching culture is considered important by most teachers but Omaggio (1993) has found that it has remained "insubstantial and sporadic in most language classrooms".

Work on culture learning and teaching has been more interested in attitudinal issues relating to learners' development of tolerance and understanding of other cultures as well as in the degree to which the study of other cultures enhances cultural self-awareness. It goes without saying that this work is important and needs to continue, however, only a minimal amount of research has been carried out on the process and extent to which adults are able to acquire, in the sense of appropriate, another culture in order to improve their communication skills (Lantolf 1999:28). However, although insubstantive and sporadic, the last three decades have seen growing attention directed to the issue of teaching culture as part of foreign language learning in order to improve their communication skills. Seelye (1981, 1994), Crawford-Lange and Lange (1984), Byram (1988), and Kramsch (1993) have proposed models for integrating culture and language teaching.

In the 1970s, Brooks (1975) and Nostrand (1974) tended to view culture as a relatively invariable and static entity made up of accumulated, classifiable, observable, thus eminently teachable and learnable "facts". This perspective simply looked at the different cultural facts, while neglecting the fact that culture was changing all the time. With social change, values and beliefs were also changing constantly. This point of view admitted that knowledge of the culture in which the language functions played a role could not be easily dismissed, but the cultural component was seen as an information component rather than a process component, that is to say that culture teaching and learning tended to be limited to the level of knowledge and comprehension. This view is important but it does not encourage students to apply learned cultural knowledge and facts in new situations. Neither does it encourage students to look for an organisational structure of what is learned. It is generally accepted that cultural learning has to take place as an integral part of language learning, and vice versa (see Chapter 3.1.1), however, the mere acquisition of information about a foreign country is neither adequate nor sufficient, because when encountering new situations the learners may not know what to do. Cultural learning will best serve students if it induces adaptive behaviour based on sophisticated mental models of how the host culture functions.

Culture is later seen as dynamic and variable. Its members display a great range of behaviours and different levels of attention to the guiding value orientations, and meaning is continuously being constructed through human interaction and communication. This transformation in perspective is characterized by conceptual shifts from culture-specific to culture-general models of intercultural

competence, cultural stereotypes to cultural generalizations, cultural absolutes to cultural variations (within and across cultures), and culture as distinct from language to culture as integral to language.

Another feature of this transformation is that the role of cultural context is recognised. Heath (1986) proposes that most human interaction is based not so much on people having shared, intimate knowledge of each other, but rather on their having an understanding of the context in which the communication is taking place. Understanding the context means the persons know these cultural meanings associated with time, place, person, and circumstance. This understanding, in turn, prescribes language behaviour appropriate to those circumstances. In essence, one does not need to be familiar with the other person in order to communicate, but one does need to understand the context. This, of course, becomes far more problematical in cross-cultural encounters. In essence, this provides the motivating force for the present research study: appropriate methods and media are essential to develop the understanding of this context.

From a social psychology point of view, Keller (1983) considers cultural studies to be a means of creating greater understanding of stereotypes of a foreign people and the autostereotypes held by that foreign people. His opinion is that one of the purposes of language teaching is to produce better matches between these two.

From an ethnomethodology point of view, Firges & Melenk (1982) regards "little *c*" as essential, believing that 'Little *c*' culture pertains to our daily behaviours, our daily ways of looking at subtle situations, which require interpretation based

on our past education, our upbringing, the subconscious cultural values that have been implanted in us. This indicates that cultural studies should be the experience of everyday life of the native of the foreign country. Little *c* represents everyday knowledge which the native possesses unconsciously, but which the non-native has to handle consciously. It is in language and texts that this foreign reality is to be found, and thus language and cultural studies have to be integrated. Loveday (1983) discussed these culturally specific presuppositions and expectations which language learners needed to be aware of and able to handle, and pointed out how little was known and how lacking in methodology language teaching was in this respect.

More recently, it has been recognized that cultural learning positively affects students' linguistic success in foreign language learning, and that that culture can be used as an instrument in the processes of communication when culturally-determined behavioural conventions are taught. It has also been suggested that culture should not be seen as a support to language teaching but that it should be placed on an equal footing with foreign language teaching (Byram 1994). Buttjes even challenges the dependency relationship of culture to language by claiming that "culture learning is actually a key factor in being able to use and master a foreign linguistic system" and not just a "rather arbitrary claim that culture learning is a part of language teaching" (Byram 1989:60).

Regardless of the diversity of different points of view, it is now widely recognized that culture and language are interrelated and that language is used as the main medium through which culture is expressed (Montgomery and Reid-

Thomas, 1994). As the importance is realized by more and more educators and teachers, professional organizations such as ACTFL (American Council on the Teaching of Foreign Languages) have issued new guidelines to expand language education to explicitly include culture learning (ACTFL, 1996; Kramsch, 1991).

Under these circumstances, language teachers are being urged to make culture a part of their language lessons. More and more learners of English, especially those at the intermediate and advanced levels, are being offered courses that are directly concerned with the culture of the West. These courses vary widely with respect to what is taught in the name of 'culture' and how the cultural information is presented. Some teachers emphasise the 'big *C*' elements of British and American culture, others emphasise the 'little *c*' elements of British and American life. Initially, 'Big *C*' culture benefited from a clearly identified curriculum and a wide variety of related teaching materials but soon published language teaching texts and materials were mainly focused on cultural behaviour and the role it played in communication. Rather than presenting English in isolation, such materials encourage students to make and share cross-cultural comparisons and to learn about British and American behaviour and customs as they practice and improve their English language skills (Stempleski 2002).

In this new perspective, the learning goals have shifted from the memorization of cultural facts (including sociolinguistic conventions for language use) to higher order learning outcomes including: the acquisition of "interactional competence" and learning how to learn about culture. Cultural learning, as a result of language

learning, broadens the horizons, and once that is recognized then the need for good "culture teaching" becomes quite evident (Byram 1989:4).

Consequently, the new culture learning standards articulated by the language education profession provide a clearer sense of direction than anything to date. The curriculum is being broadened to include distinct cultural studies components including both culture-specific and more generalizable intercultural communication materials (Murphy, 1988). Derived from social and cultural anthropology, culture teaching is now providing a comprehensive description of the way of life of a society. In Britain, it is called 'background studies', which immediately defines its position as subordinate to language. In France it is often referred to as 'civilisation'. In Germany, where the concept probably originated, it is more usual nowadays to describe culture teaching as 'Landeskunde' (area study) rather than 'Kulturkunde' (Stern 1992:205).

The development of communicative language teaching in the 1990s was characterized by a growing stress on the merging of language and culture learning (Byram, 1997; Kramsch, 1993). What is more, changes in linguistic and learning theory suggest that culture should be highlighted as an important element in language teaching. Efforts linking culture and language learning are impelled by ideas originating in sociolinguistic theory, schema learning theory and cultivation theory.

Sociolinguistic theory focuses on the social and cultural aspects of language. From a sociolinguistic perspective, competence in language use is determined not

only by the ability to use language with grammatical accuracy, but also to use language appropriately in particular contexts. Thus, successful language learning requires language users to know the culture that underlies language (Tseng 2002). Applying rationales which are different from those used by sociolinguists, schema theorists also propose culture as key to language learning. Whereas sociolinguists think from the broader social point of view, schema theorists think from a cognitive perspective. A schema is a set of related place-holders or slots which can be filled in by context or by additional information from the speaker, what is filled in for one slot may affect what can be filled in for other slots (D'Andrade 1995:1). Therefore, the cultural context and cultural information helps language learning. In addition to sociolinguistic and schema theory, cultivation theory also provides a rationale for addressing culture in a foreign language learning. According to cultivation theory, culture affects changes in individual perception and is vital for expanding an individual's perspective of the world. Learning about culture changes a person from a naïve individual into one who understands the ways in which the person is shaped by cultural forces and is thus able to accept the diversity of those forces. Sociolinguistics, schema learning theory and cultivation theory all recognize the importance of culture in foreign and second language learning, even though each theorizes the importance of culture in different ways. Success in language learning is conditional upon the acquisition of cultural knowledge: language learners acquire cultural background knowledge in order to communicate, and to increase their comprehension in the target language (Tseng 2002).

Added to the three theories mentioned above, the concept of context is instilled with a new meaning. It is recognized that it is not the context itself that alters language use or how the interactants behave, it is the meaning associated with that context, and that meaning is determined by the culture. It is essential, therefore, for language learners to also be effective culture learners. They must know how to "read" the context. This suggests that language instruction must provide opportunities for students to be exposed to, or better yet, immersed in the target culture in order to gain skills in ascertaining the cultural meanings of time, place, person, and circumstances. "Taking culture seriously means questioning the very base of one's own intellectual inquiry, and accepting the fact that knowledge itself is coloured by the social and historical context in which it is acquired and disseminated. In this respect, language study is an eminently cultural activity" (Kramsch 1998:9). Culture and language learning involve a dynamic relationship between the situation and the actors in which cultural context, prior experience, and other factors come into play (Street, 1993). Putting culture at the core of language education means preparing students to be culture learners.

Culture learning is now anchored in three fundamental learning processes: (1) the learners' exploration of their own culture; 2) the discovery of the relationship between language and culture, and 3) the learning of the heuristics for analysing and comparing cultures (Byram 1988). Meta-awareness and cross-cultural comparison lie at the heart of such a culture pedagogy. Culture studies became an inseparable part of the English teaching process and has brought the English language closer to students in a lively, active and engaged way (Maja 2000:224).

3.1.4 Learning environments and culture learning

With the development of functional learning environments, the potential of electronic learning networks for enhancing intercultural learning was recognized (Riel, 1994:457-458; Peterson, 1997:31). The accelerated pace of the flow of knowledge and ideas and communication meant that language and culture teaching would need to consider how they are to transform themselves in order best to respond. To be successful, overseas students have to adapt to an academic culture where the teaching, the testing, and the amount and type of work necessary may be unfamiliar (Rao 1979). Underlying these new practices are new assumptions about what constitutes knowledge, the appropriate ways to display knowledge, and how the individuals involved should interact. To become effective culture learners, students must develop a variety of learning strategies ranging from reflective observation to active experimentation or what Kolb (1975) refers to as 'experiential learning' style. With encouragement, students can realize how to learn about cultures, and such learning skills may include learning how to learn from one another, particularly in multicultural groups (Nelson, 1995:33). Learners make a foreign language and culture their own by adopting and adapting it to their own needs and interests (Meyer 1990:81).

Learners need to be prepared for the experience of the daily rhythm of the foreign culture, of the behaviours which are different and those which are the same but have a different significance. Learners need both the skills of fluency and accuracy in the language and the awareness of the cultural significance of their utterances and behaviours. Direct experience of the foreign culture is therefore

not the culmination of language and cultural learning, not the final performance for which all else is rehearsal, but rather an integral contribution to the whole process which is prior to, simultaneous with, and subsequent to other components (Byram 1990:27). This being the case, it is necessary to identify appropriate learning environments, methods and media.

The goals of cultural learning include awareness of its characteristics and of differences between the target culture and the learner's own culture; and a research-minded outlook, i.e. willingness to find out, to analyse, synthesise, and generalise (Stern 1992:215). To achieve the goals, the limitation of the classroom becomes apparent. Although theoretically accepted, when applied to the classroom, linking language learning and cultural studies together is neither easy nor comfortable. There are several reasons for this. Firstly applied linguistics and language education generally have tended to look to linguistics and psychology for their theoretical and conceptual frames, whereas anthroplogy, which can claim to be the discipline most closely associated with studying cultures, has been pushed to the margins. The result has been that culture has not been debated in the language pedagogy literature, but has simply been inserted into language textbooks. Cultural references tend to take the form of essentialist statements with little sense of individual agency (Barro, Jordan and Roberts 1998:77).

The cultural fragments in textbooks have tended to be dealt with superficially as "thin description". Another problem is that many teachers remain unsure how best to teach it (Kern 2000:1). Cultural teaching in language classes has remained

quite limited. For example, classroom observation studies carried out in the UK indicate that there is little emphasis on developing students' knowledge about the foreign culture. Language pedagogy usually still focuses primarily on the mechanics of language skills and devotes little time to the real task of developing students' understanding of another culture (Furstenberg 2001:2).

There are several key theoretical criticisms of the classroom as an environment for culture learning. Damen (1987), for example, argues that classroom-based learning is cognitive and deductive in nature, relying far too much on rule-ordered pedagogy. Accordingly, learning becomes superficial; students simply memorize the material without reflecting or integrating it into a larger cultural knowledge base. Ellis (1992) asserts that the discourse in the average classroom is rigidly controlled by the teacher, who determines who speaks, how long they speak, and when they start and stop. This type of setting provides little opportunity for students to learn how to appropriately engage in or disengage from the communication process (Sacks, Schegloff, & Jefferson, 1974). Similarly, Pica (1983) found that the formal classroom emphasizes rules, sequence, and predictable error correction by the teacher.

Information and communication technologies have now become indispensable in research and teaching, and the role of these technologies in resolving the problems associated with classroom-based activities, and facilitating language and culture teaching is considered in the present study. As a powerful tool for communication, the Internet has been the engine for accelerating the speed of the

flow of information. It is this potential that makes the Internet the channel to bring culture learning from the outside world into the classroom.

To summarise, language and culture depend on each other. Students need to raise cultural awareness while learning the language. Culture should be part of language learning in the curriculum, and multimedia and their attendant methodologies are investigated in this study as a means to enhance cultural awareness.

3.2 Contrastive rhetoric: academic writing

While the relationship between language and culture and the influence of cultural awareness on language learning have been just discussed, this section will deal with, in more specific ways, the impact of Chinese culture on Chinese students' English writing from the point of view of Contrastive Rhetoric. As Panetta pointed out "Contrastive rhetoric is developed to meet the need of understanding why second language writers have difficulties writing in English even when they have good control of grammar" (Panetta 2002:1).

Contrastive rhetoric is the study of the differences that occur between the discourses of different languages and cultures as reflected in ESL/EFL students' writing. Contrastive rhetoric studies how writers' cultural backgrounds influence their organisation in writing; what they choose to use as evidence in supporting their main ideas; how they express their main ideas; and how they write in the

foreign language, usually English (Benda 1999). Contrastive rhetoric studies how different rhetorical preferences are reflected in textual organisation in different languages (Grabe and Kaplan 1989). It is the area of research in second language learning that identifies problems in composition encountered by second language writers by referring them to the rhetorical strategies of the first language. Contrastive rhetoric maintains that language and writing are cultural phenomena, and as a direct consequence, each language has rhetorical conventions unique to it (Connor 1996:5).

From the students' point of view, multicultural and multilingual students at university level present diverse approaches to reading, writing, and critical thinking, often based in the patterns of their home languages and cultures. Frequently, these students may use different ways to convey ideas logically and persuasively than those with which native English-speaking faculty and students are familiar. Writing at university level requires students to develop an assertive thesis, one that makes a claim, and to support that thesis logically with substantive evidence. When multilingual and multicultural students are faced with such writing assignments, they may face logical and structural problems because they may not know how to connect their ideas and their evidence in the expected rhetorical structure. They may present discrete bits of information that seem disconnected or not even related to the thesis. In many cases, these students rely on their native cultural and linguistic patterns of explanation and as a result, to their instructors, their writing seems disorganised (Bliss 2001:15).

From the teachers' point of view, the overseas students do not understand what is expected of them in tertiary-level writing classes. They may put down whatever is in their mind and their ideas may spread from one paragraph to another without a main theme to link them together. The teachers may not understand that these essays result from a different kind of thought pattern, resulting from a different cultural context.

Actually, learning to compose in English is not an isolated classroom activity, but a social and cultural experience. The rules of English composition encapsulate values that are absent in, or sometimes contradictory to the values of other societies. Therefore, learning the rules of English composition is, to a certain extent, learning the values of Anglo-American society (Shen 1989). The process of learning to write in English is in fact a process of creating and defining a new identity and balancing it with the old identity. "The process of learning English composition would have been easier if I had realised this earlier and consciously sought to compare the two different identities required by the two writing systems from two different cultures", as a Chinese scholar (who is now teaching English writing in the US) claimed (Shen 1989).

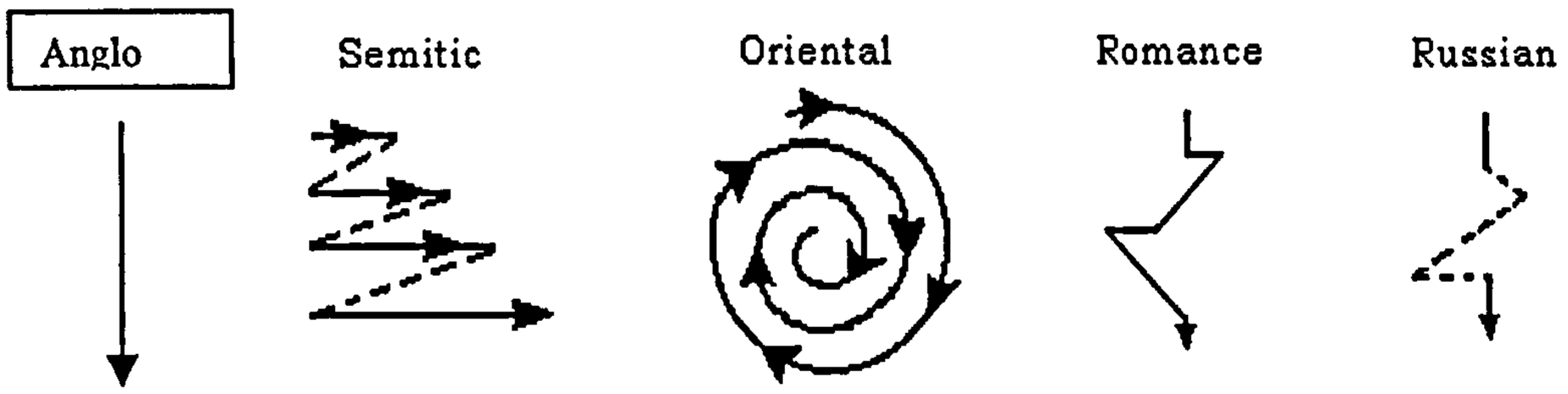
Cultural differences are keenly apparent in the juxtaposition of graduate-student writers' culturally grounded discourses and those of the academy's disciplinary communities. As Comfort observed, "Viewing this juxtaposition through the lens of contrastive rhetoric, it becomes possible to see more clearly the issues involved when student writers attempt to integrate cultural perspectives. The interweaving of such diverse cultural influences shapes a particular kind of

writing self whose distinctive rhetorical identity authorises the content of a text" (Comfort 2001:93).

3.2.1 Kaplan's thought pattern

As early as 1966, the American applied linguist Robert Kaplan's seminal article "Cultural Thought Patterns in Intercultural Education" laid the groundwork for what has become known as Contrastive Rhetoric, a branch of linguistic study that points out the nature of rhetorical differences among cultures, using discourse structure as the site for investigation discourse (Woolever 2001:47). In his pioneering study, he analysed the organisation of paragraphs in ESL student essays and identified five types of paragraph development for five groups. Kaplan suggested that the forms these essays took might reflect the "thought patterns" of the writers' cultures.

Figure 3.2: Cross-cultural differences in paragraph organization in Kaplan's (1966) study on cultural thought patterns in intercultural education



Kaplan, Robert. *Cultural Thought Patterns in Intercultural Education*. In McKay, Sandra (Ed.) *Composing in a Second Language*, 1984.

The illustration graphically represents paragraph structures by speakers of several languages: linear development in Anglo-European expository essay, extensive parallel constructions in the Semitic group, an "indirect" approach to the topic in the Oriental group, and frequent digressions in Romance and Slavic groups. ("Oriental" thought was said to resemble a spiral, for example, whereas "English" thought was said to resemble a straight line). Kaplan's view is that foreign students who have mastered the syntax of English may still write a bad paragraph or a bad paper unless they also master the logic of English. He proposes that contrastive rhetoric be used as a way for ESL/EFL students to become familiar with the logic of English and produce text that meets the expectations of English readers — especially readers who are members of the academic discourse community (Gibson 2002:1).

Contrastive rhetoric was intended to move learners beyond the memorisation of dialogues, beyond regurgitation of set patterns, beyond exclusive concern with grammatical accuracy, and beyond concern only with the sentence. It was intended to facilitate reading and writing in English, creative use of the second language, and the ability to express one's ideas in text in the rhetorical style of the second language (Kaplan 2001).

Supporters of Kaplan maintain that contrastive rhetoric provides important insights as to how culture-bound thought patterns are reflected in ESL/EFL students' writing and how those thought patterns limit their ability to communicate in written English. They insist that the best way for foreign students to succeed within the academic environment is to produce writing that

conforms to the conventions of written English and meets the expectations of native speaking readers. Leki (1991) suggested that even though writing instructors who teach ESL students may not have backgrounds in the rhetorics of different cultures, contrastive rhetoric helps teachers to bypass stereotypes and realise that writing strategies are culturally formed. According to Leki (1991), although ESL/EFL writers seem to "miss the point", the "proper" way to make a point in one language differs from the "proper" way in another. What is relevant/irrelevant, what is logical/illgical, what constitutes an argument, are all *culturally* determined. (Leki 1992). Pointing out and realising such contrasts between rhetorics helps instructors and students analyse what represents successful communication among cultures (Panetta 2001:5).

However, Kaplan's detractors criticise him for the simplistic nature of his conclusions. They complain that contrastive rhetoric places too much emphasis on the product of a writing task and not enough on the process the writer may have employed to produce it (Gibson 2002:1), and Kaplan was criticised for focusing on the organisation of the individual paragraph, not the entire discourse. Because the paragraph is often an arbitrary and artificial unit of discourse, not always intended by the writer as a unit of thought, it is less likely to reveal "cultural thought patterns" than are whole discourses. He was also criticised for overgeneralisation. To speak of "oriental rhetoric" when Asia is comprised of over fifty languages, countries and cultures is most certainly a gross generalisation. He was also criticised for mixing the types of evidence for his claims by quoting not only from student essays from the 600-student sample but

also from different genres of professional writing – French philosophy and a Russian policy analysis (Severino 1993:46)

3.2.2 Cultural influences on L2 academic writing

Though controversial in nature, Kaplan's contrastive rhetoric theory inspired much research in the area of English writing and, in particular, the cultural influences on L2 academic writing. Carolyn Matalene in 1985 looked at parts of English compositions written by Chinese students and translations of various Chinese texts to explain the characteristics of Chinese rhetoric. Based on her experience of teaching English in China, Matalene not only dwelled on the formal aspects of rhetoric such as the forms that paragraphs take, but also discussed Chinese writers' reliance on manipulation of set phrases and textual forms. Yet Matalene's work was again criticised for her overgeneralizations and her sample was considered not representative. For example, Yameng Liu (1996) pointed out that the students that Matalene quoted from as being exemplars of traditional Chinese rhetoric are all English majors and as such "must have been exposed--however limited or imperfect that exposure may be--to English-based texts, rhetorics, discourses, and cultures for a considerable period of time". Matalene's article is also criticised for its assumption of an unbroken transhistorical continuity in Chinese rhetorical theory. As Xin Liu (1996) concludes, studies like Matalene's and Kaplan's assume that ESL/EFL students' English writing errors are all based on negative transfer from their native languages (Liu 1996:23).

Focusing their study on Chinese students, Mohan and Lo (1985) challenged Kaplan and Matalene's negative transfer as the only way to account for the characteristics of non-native student writing. Their opinion is that "the difficulties of Chinese students writing in English may be better understood in terms of developmental factors: Ability in rhetorical organisation develops late, even among writers who are native speakers, and because this ability is derived especially from formal education, previous educational experience may facilitate or retard the development of academic writing ability" (Mohan and Lo 1985: 528).

As the study of EFL writing spreads, more and more attention is paid to the significance of contrastive rhetoric. Leki (1991) undertook a case study on a Chinese student's writing and discovered that what may be appropriate in a native-speaker writing class may not work in an ESL/EFL context (Leki 1991). JoAnne Liebman conducted an ethnographic project in 1988, which is quite unique. For this project, Liebman had her students research contrastive rhetoric in terms of their own writing and cultures. Because the students were researching contrastive rhetoric, they had an opportunity not only to practice rhetoric, but to study it, which led to an awareness of the rhetorical choices available in English or any language. The study shows that teachers should accept the cultural insights that contrastive rhetoric can produce and apply them to writing instruction. The analysis of writing helps students become more aware of how cultural background affects thought patterns and reader expectations. By knowing their foreign instructor's expectations, they will be better prepared to meet them (Gibson 2002).

Xiaoming Li's study (1990) is from another angle. She organized three rounds of discussion in her research: First, four "principal" teachers were selected, two from China and two from America. Each of them was asked to recommend five to six pieces of what they considered the best personal narratives of their classes and explain to the researcher the reasons why they considered those pieces the best by elaborating on their original written comments on the students' papers. The discussion as such was between the principal teacher and the researcher on a one-to-one basis. Second, six pieces were selected out of the pool of recommended papers, and the four principal teachers were asked to comment on all six pieces in the same manner as they did on their own student papers. They were then invited to discuss the comments of other teachers and to explain to other parties their rationale of evaluation when the researcher saw discrepancies in their evaluation. The discussion as such was among the four principal teachers, though they did not meet physically. Third, four pieces were selected from the six papers and distributed to a wider audience of composition teachers in both countries (thirty teachers in each). The respondents were asked to rank order of the papers and explain the criteria behind their ordering. The last round of discussion was, therefore, in the form of survey, among a larger number of teachers in both countries. The result of data showed how typical the four principal teachers comments are.

American teachers might not give the same grade to a paper, but few would criticize a paper for its lack of significant social consequences, as many Chinese teachers did. Chinese teachers, likewise, might disagree among themselves as to which was the best paper, but few would select one because of its ambivalent and

provocative ending. What most Chinese teachers saw as an expression of honest, strong and sincere emotions, was seen by most American teachers as uncontrollable, almost peevish. And the American teachers' insatiable appetite for realistic details could be matched only by their Chinese counterparts' rapture over poetic images (Li 1996:111).

For example, concerning the overall structure, Mr. Zhang, the Chinese principal teacher commented that "Basically we think a piece of writing should have four components: introduction, development, transition, and closure. I think this basic format is still valid because they are in accord with the way we think and are effective in expressing what we want to express" (Li 1996:73). What Mr. Zhang regards as the four essential components of all writing, "introduction, development, transition, and closure" are apparently not essential to the American teachers who want the opening to put the reader directly on the scene and an ending that does not close up all possibilities. The word "introduction" is replaced by "lead", a journalistic term. Introduction for the Chinese reader is like the Chinese custom of chatting over a cup of tea before the guests move to the dinner table, a leisurely custom incongruous with America's fast-paced life. American customers prefer to be led directly to the main course -- and maybe have tea afterwards" (Li 1996:80).

Apart from the general structure, another feature that draw both Chinese and American teachers' attention was the use of metaphors. For example, in an essay being examined, a Chinese student wrote:

Life in childhood is like scattered pearls, bright and shiny, and the river in my hometown is a thread that strings together those pearls of joy and misery, so that I can cherish them forever.

As one American teacher commented "The metaphors are woven skilfully into the text, also helping to establish the continuity of the river in the lives of all the people who live along it. Older generations have learned the same lessons and the future is built on the past". Another American teacher expressed her appreciation of the Chinese pieces "Delicate in feeling and thought and imagery -- the courage and interest in creating metaphor and using dialogue is delightful -- the writing has depth and credence" (Li 1996:106).

The point of Li's study is less about the process of writing good essays than it is about characteristics of good essays, as judged by teachers from different cultures. In a sense, this kind of study provides groundwork for developing cross-cultural understandings that could lead to better teaching of ESL/EFL writing. Xiaoming Li's book *"Good Writing" in Cross-Cultural Context* derived from her PhD thesis, focuses on Chinese and American high school students' written work and on the cultural reasons behind what makes their teachers consider them good. Xiaoming Li's research provides a good introduction to some of the problems involved with making cross-cultural comparisons of writing, problems which also affect studies of ESL/EFL students who might be called "cross-cultural writers." Her investigation has implications both for ESL/EFL writing and for how ethnography might be used in contrastive rhetorical studies.

Although mainly concerned in its first 20 years with the writing of ESL/EFL students at US universities, contrastive rhetoric today contributes to knowledge about preferred patterns of writing in a variety of "English-for-specific-purposes" situations with the goal of helping teachers and students around the world (Connor 2001:75). Kaplan's (1966) contrastive rhetoric brought a new dimension of cultural differences into English composition study and is valuable in that it has pointed out the nature of those rhetorical differences which, although obvious to English native speakers, are often "felt" rather than understood (Centre for Literacy Studies 2002). Kaplan's work is also valuable for teachers in ESL classrooms, as it describes culturally based schemas at the paragraph level in written discourse (Woolever 2001:47). For the first time, academically and formally, ESL/EFL students' English writing was analysed through the influence or transfer of their own culture or thought pattern of their first language. As a result, early contrastive rhetoric opened a new horizon for ESL/EFL writing to be analysed under L1 cultural background.

3.2.3 Writing across cultures

The 1990s have seen a renewed interest in the study of writing across cultures. In 1991, two leading ESL composition experts Ann Raimes and Ilona Leki, each wrote about the importance of contrastive rhetoric as a means of raising awareness among teachers of different L1 backgrounds and the effects of these backgrounds on L2 writing. Raimes (1991) calls for a broader definition of contrastive rhetoric in which students' L1 is shown to be an important resource rather than a hindrance in writing. Leki (1991) focuses on the benefits of

contrastive rhetoric for ESL teaching (Connor 1996:18). As the study of culture and written discourse has entered into more depth, contrastive rhetorical researchers have found it necessary to broaden their interests to include not only the texts that students are writing, but the processes that students go through as they work on their writing and the social and cultural contexts in which those processes are situated.

The new-era contrastive rhetoric has extended to a wider range covering both social and cultural context and has provided insights into student problems with adjusting to English rhetoric.

3.2.4 Inductive vs. deductive (presence and placement of thesis statement)

A paper written in the preferred British, or American deductive style in which the main idea is stated first would be considered poorly done in China where the inductive pattern is more common, with background material given first to lead the reader to the main point (Cortazzi & Jin 1997). However, a Chinese student's delayed introduction of purpose makes the writing appear incoherent to the English-speaking reader (Connor 1996:20), and results in Western teachers commenting that: "The Chinese student's paper was lovely, but that they had to get to the end of the essay to discover what it was really about" (Ballard and Clanchy 1991:31). Matelene shows in sample essays written by Chinese ESL students in China that arguments are often delayed and use statements that seem unconnected in the eyes of the Western reader (Matelene 1985). Scarcella (1984) examined the function of initial sentences in native- and non-native-English-

speaking American university freshman essays. Interested in comparing how writers introduce a topic to their readers, she found that non-native speakers tended to use longer but less effective "orientation" (introductions to the topic) (Connor 1996:93). Schneider and Fujishima also claim that, at the discourse level, the Chinese student has learned the technique of starting with a broad topic, and gradually narrowing it down to the focus of the paper (Schneider and Fujishima 1995:10).

This inductive and quasi inductive style is not confined to the Chinese. Some other Asian countries conform to the same rhetoric as well. As described by Grabe and Kaplan (1998), the thesis statement is often buried in the passage in Japanese. Japanese readers do not expect a thesis to be explained to them at the outset. Instead, Japanese readers are better at contextualising a text than are English readers (Grabe and Kaplan 1998:190). Hinds (1990: 98) described how writing in Japanese, Chinese, Thai, and Korean favours a "quasi-inductive" rather than an inductive or a deductive style of presentation, or what Hinds called a "delayed introduction of purpose". In general, Hinds argued that there is an oriental style involving a delayed introduction of purpose (Grabe 1998:190). Asian students do not seem to approach a topic as directly as expected by the Western teacher (Ballard and Clanchy 1991:31). Connor also noted the differences between Semitic and Oriental languages: "paragraph development in Semitic languages is based on a series of parallel coordinate clauses. Essays written in Oriental languages use an indirect approach and come to the point only at the end" (Connor 1996:15).

In English, an essay is a piece of writing several paragraphs long written about one topic. The aim of the essay should be deduced strictly from the wording of the title or question, and needs to be defined at the beginning (Gillett 2001). In the inductive pattern, the point is to make it quite clear why the speaker is coming to that particular conclusion. This is done by outlining the arguments and by testing the other participants for potential acceptance of the topic before introducing it. In the deductive pattern, the topic is introduced at the beginning so that it will be clear what the relevance of the supporting arguments is. While the intent is the same, the strategies are starkly contrasted (Scollon & Scollon 2000).

The difference between these inductive and deductive preferences results from the writers' social and cultural backgrounds, and different cultures have different ways of doing things with language. These different uses have reflexes in the preferential organisation of discourse (Grabe and Kaplan 1998:185). As for writing, different cultures have different assumptions about a particular style of writing and the principles that are involved. Writers from different social and cultural backgrounds have different attitudes towards other people and themselves, the fact of which affects their writing in terms of their choice of expression. The close relationship between language and thought and culture is now recognised. In the West, writers tend to state clearly at the very beginning what an essay is about, while in China and some other Asian countries, writers are likely to give background information first and then lead to the main point step by step.

Cho (1999) suggests that it is possible to judge whether an essay is inductive or deductive by looking at the presence and placement of the thesis statement. If the thesis statement is placed at the beginning of the introduction, the essay is assumed to be deductive, and if not, it might be either inductive or quasi-inductive.

A thesis statement is defined as a sentence or a short paragraph summarising the fundamental argument of an essay, which comes in the first paragraph of the essay, though there is no rigid rule about position (Megginson 1996:1; University of Toronto 2002). Its characteristics are:

- It makes a definite and limited assertion that needs to be explained and supported by further discussion;
- It shows the emphasis and indicates the methodology of the argument;
- It shows awareness of difficulties and disagreements (Procter 2000).

There are two kinds of thesis: one is an implied thesis and the other is a stated thesis. An implied thesis is one that is not stated in writing. Instead, the point being made is so clear to readers that the author has decided there is no need to construct a stated thesis. A stated thesis is one sentence that serves as the main point of the entire essay. The point must move away from common knowledge, choosing instead an insight and/or argument for a chosen audience. The function of the thesis statement is to serve as a unifying point for the introduction, body paragraphs, and conclusion (Harcourt College 2001:1). A thesis statement tells the reader what the writer thinks about a topic, to form an opinion and to state it

clearly and unequivocally. The thesis statement presents the writer's judgement or opinion about an issue. A good thesis statement is short and simple and is limited to one main idea about the topic.

It is worth mentioning at this stage that both inductive and deductive styles are valid ways to present information or form an argument but are not esteemed equally in different cultures, although both the inductive (topic-delayed) and deductive (topic-first) patterns of discourse are used for the same main purpose: to reduce the overall ambiguity of the discourse.

3.2.5 "start-sustain-turn-sum" vs. "introduction-body-conclusion" (number of paragraphs)

It is claimed that Chinese rhetorical style consists of a four-part pattern: *qi* (start, open) establishes the field or prepares the reader for the topic; *cheng* (carry on, sustain) introduces and develops the topic, *zhuan* (turn) turns to a seemingly unrelated subject or to look at the problem from another angle; and *he* (conclude) sums up the essay whereby the author's opinion is established or hinted at (Hinds 1990, Swales 1990, Connor 1996 and Grabe & Kaplan 1998). This pattern is believed to have originated historically in Chinese poetry (Tsao 1983).

This four-part pattern not only forms one of the rhetorical features of Chinese students' Chinese essays, but also exerts an effect on their English essays. Fagan and Cheong (1987), for example, analysed sixty English compositions written by Chinese ESL ninth graders in Singapore and found that as many as 50.9 % of the

students wrote their English compositions following the Chinese pattern of *qi-chang-zhuan-he* instead of the English pattern in which a topic sentence is supported by other sentences (Connor 1996:39). Also, Taylor and Chen analysed thirty-one papers in the related fields of geophysics, metallurgy, and mineral processing, materials science and materials engineering. The papers were published in the English-speaking world as well as in China: eleven in English from English-speaking countries; ten in English by Chinese native speakers; and ten in Chinese by Chinese speakers. In these papers, Swales' (1990) four moves (equivalent of the four part pattern mentioned above) were examined. The analysis of the four-part pattern structures showed that each of the four moves was enjoyed by all three groups. Yet some variation was found among the groups, and a fairly consistent pattern of difference was found between the Anglo-American-English group on one hand and the two Chinese groups on the other. The Chinese scientists were less likely to elaborate the moves, wrote at less length, and cited fewer references. The major difference was in the second move: the Chinese scientists paid less attention to summarising the literature in their fields of study (Connor 1996:41).

Besides China, the application of the four-part pattern of *qi-cheng-zhuan-he* to organise paragraphs is common for Korean and Japanese as well (Tsao 1983 quoted by Grabe and Kaplan 1998:189). Hinds (1983, 1984) has cited several examples of Japanese news stories written in a form known as *Ki-shoo-ten-ketsu*. According to Hinds, the *Ki-shoo-ten-ketsu* form has its origins in Chinese poetry and constitutes a norm of Japanese style. Texts in this form have a four-part pattern of development (Odlin 1996:62). While the first two parts of this

rhetorical format will not seem strange to an English-speaking audience, the third part (the *ten*) seems to be an abrupt shift away from the topic originally introduced. In fact, the rhetorical norm is for the *ten* to introduce a subtopic that is only indirectly related to the *ki* and the *shoo*. Hinds' research indicates that Japanese readers are quite accustomed to reading such articles. In comparison with an American group that read translated passages, a group of Japanese readers more accurately recalled information in news articles in the *ki-shoo-ten-ketsu* form.

Similarly, Eggington (1987) found the Korean readers were often able to recall more information when it was presented in "non-linear" forms like the *ki-shoo-ten-ketsu* than when it was presented in the "linear" form that Kaplan deemed to be characteristic of writing in English. The indirection seen in some Japanese and Korean prose thus seems to produce no adverse effects on comprehension among readers used to such forms. There is, furthermore, evidence that readers in the Far East consider indirection to be quite acceptable: results of a survey by Hinds (1983) indicate that Japanese readers are more likely than American readers to consider articles in *ki-shoo-ten-ketsu* form as well written. The results of such investigations suggest that a passage may be more readable or less readable depending on readers' expectations, which are partially shaped by language and culture (Odlin 1996:64).

Differently from the *qi-cheng-zhuan-he* pattern, the English way of structuring an essay, though it is claimed that its structure is flexible, normally includes introduction, body and conclusion.

English essays place emphasis more on form than Chinese writing. Each part has its distinct functions: the introduction brings out the theme, the ending summarises and the middle part must be coherent and logical. While Chinese writing places the emphasis more on the wholeness. It is more synthetic, more changeable and there is no clear-cut separation between the parts. Also Chinese is not very strict with expressing the coherent links between parts. It relies on the readers' interpretation.

Severino (1993) undertook a study for students to enable them to articulate their perceptions about their writing instruction and for teachers, tutors, and researchers to know how they view the writing they had done in their native countries. Because Chinese speakers are the largest international student groups in the US, he examined only the information and experiences revealed in the writings of Chinese students. In the report, he claimed that the four-part essay structure described by Chinese-speaking students is more suggestive of indirectness, especially the third part which students described as the "inversion", changing something opposing or contrasting to the second paragraph. "The turning" "the opposition" and "the application" in the four-part structure is akin to the classical Chinese poetic form *chi-cheng-juan-he* described by Feng-ful Tsao and demonstrated by John Hinds to be common in Korean, Japanese, and Thai as well as in Chinese (Severino 1993). A student in this study eloquently pointed out that cohesion among supporting paragraphs is established differently: "In English, the last sentences in the previous paragraph give the reader a strong hint about the next paragraph. But in Chinese, the relationship between

paragraphs is like rivers' confluence: starting wherever you want only if you can lead them into mainstream (Severino 1993).

Cho (1999) proposed a way of detecting structure pattern by looking at the number and function of paragraphs by stating that "The total and average numbers of paragraphs may reflect the general structure of the essay that each group of students intended to construct. Consequently, comparing those numbers may reveal rhetorical differences between the two groups" (Cho 1999:23). Thus, the number of paragraphs may contribute to the identification of the rhetorical style of an essay.

3.2.6 Circular vs. linear (topic sentences and topic changes)

Kaplan's work (1966) (Figure 3.1) suggested that Anglo-European expository essays follow a linear development while in Chinese, as well as other "oriental" writing, the paragraph development may be said to be "turning and turning in a widening gyre". The circles or gyres turn around the subject and show it from a variety of tangential views, but the subject is never looked at directly (Kaplan 1966:10). Ostler's (1997) research proved that 89% of American native speakers' essays put the theme at the beginning of the essay. Comparing with the Anglo-European linear style, many Western teachers find Asian students' essays confusing because there is either no topic sentence in the whole paragraph or too many things are mentioned within one paragraph, and therefore they write as comments: irrelevant, illogical, or unclear. Shen (1989) claimed that the essential rule for English logical organization is the use of a topic sentence, whereas she

found the essential structural rule for Chinese composition to be from surface to core. Young (1994) contended that *qi-chen-zhuan-he* pattern continues to influence Chinese writing and Western readers might see Chinese style as circular starts, tangential views and subdued stances. In Eason's (1995) study, Chinese students employed topic-comment structure, delayed introduction of purpose and abrupt shifts in viewpoint. While none of the American students exhibited topic-comment structure or delayed introduction of purpose.

In Bliss' study (2001), he found that his Korean students like to write persuasively by telling about an issue in a mysterious fashion. "They write about the issue, telling various points about it. Then, they write about it again, using some of those points, plus other factors to explain the issue. And they might repeat this technique several times. As they progress through these essays, each repeat contains elements of what has come before, but new ideas are introduced. These students are arranging the data to help the reader think through the issues. The arrangement may lead an understanding reader to reach a kind of consensus of meaning by the end of the written piece. As items are introduced and eliminated, the reader must follow the various additions and subtractions, attempt to decipher the underlying logic, yet still infer the main idea" (Bliss 2001:18).

A Chinese writer often clears the surrounding bushes before attacking the real target. The logic of Chinese composition is like the peeling of an onion: layer after layer is removed until the reader finally arrives at the central point, the core (Shen 1989). The Chinese essay has the characteristics of an introverted person: soft, polite and uncontradictory, but an English essay tends to be sharp and more

direct. One way in which this can be seen is that an English essay avoids generalisations and uses specific details; the Chinese essays do not. Within the sociopragmatic rules of English, such a version is unlikely to be regarded as pragmatically effective. With the transference of pragmalinguistic and sociopragmatic rules from mother tongue to target language, their compositions seem to cause misunderstanding, to be puzzling and confusing, and may even give offence if directed to native speakers.

It is conventional in English text to have the organisational topic stated or implied somewhere near the beginning of the text; by convention, then, the text unwinds from that basic topical organising unit (Kaplan 1990). In English composition, an essential rule for the logical organisation of a piece of writing is the use of a "topic sentence". Perhaps native English speakers are able to "naturally" put their ideas in some logical order, especially since they grow up with various kinds of ordered writing that resemble the underlying structure of academic prose. But many multicultural and multilingual students are familiar with different ways of ordering information: they tell multiple stories; they think and produce analysis by repeating and deleting to arrive at a conclusion through a kind of consensus; or they simply introduce discrete points and expect the listener or reader to come to the same conclusion they have (Bliss 2001). An English expository paragraph usually begins with a topic statement, and then, by a series of subdivisions of that topic statement, each supported by example and illustrations, proceeds to develop that central idea and relate that idea to all the other ideas, to prove something, or perhaps to argue something (Kaplan 1996:3).

In a Chinese composition, "from surface to core" is an essential rule, a rule which means that one ought to reach a topic gradually and "systematically" instead of "abruptly". The Western concept of a topic sentence at the beginning of a paragraph is symbolic of the values of a busy people in an industrialised society, rushing to get things done, hoping to attract and satisfy the busy reader very quickly. Thinking back, Shen claimed that "I realised that I didn't fully understand the virtue of the concept until my life began to rush at the speed of everyone else's in the US. Chinese composition, on the other hand, seems to embody the values of a leisurely paced rural society whose inhabitants have the time to chew and taste a topic slowly. In Chinese composition, an introduction explaining how and why one chooses this topic is not only acceptable, but often regarded as necessary. It arouses the reader's interest in the topic little by little and then a sense of refinement" (Shen 1989). Shen's reflection points out the different ways of thinking and different ways of doing things between the Chinese and the Westerners. The way of expressing themselves reflects the way of life.

A Chinese student in Severino's study claimed that the support in Chinese is different than it is in English. Instead of "bragging" and defending one's own opinions, a writer considers her opinions from other points of view and then refutes these points, a practice related to the value of saving the face of the opposition by avoiding the conflict of meeting their argument head on. The conclusion differs also. In English the conclusion closes the essay, leaving nothing further to be said "It is like arriving at the end of the road" while the Chinese conclusion can be less closed, "You may not really understand what is

being talked about when you read the first or the second paragraph, and you'll have a surprise at the ending" (Severino 1993).

Due to the different cognitive patterns in Chinese and English cultures, Chinese and English essays present differences. In English essays, people give a clear idea and then support and express it directly while in Chinese essays, people show their opinion around the topic, gradually approaching it. Wang and Li (1997) analysed 180 essays written by postgraduate students majoring in natural science on the topic of "Why is English Important to Scientists". Of the essays 87.8% were circular and the characteristics were: at the beginning of the essays, the theme is buried somewhere but not explicit; the content is merely hinted at; indicating the point and at the end pointing out the main idea.

Wang and Li (1997) argued that circular rhetoric is the product of China's history, culture and society. Chinese people generally agree that this circular pattern is acceptable because it is implied and not too abrupt. It is acceptable by the Chinese but in cross-cultural communication, the native speakers of English, especially those in academic circles, find that the pattern is unclear and repetitive, even though the vocabulary and grammar is correct.

Chinese speakers typically do not use the same type of rhetorical organization that native English speakers use. Native English writers prefer a direct and to-the-point organization, whereas oriental writers prefer an indirect, talk-around-the-point rhetorical organization.

Cho (1999) has suggested that circularity may be measured by looking at the frequency of topic changes in paragraphs where topic sentences are used. Linearity is indicated by a low frequency of topic changes, a low average number of the use of topic sentences in a paragraph. "Linearity assumes that there is one idea in a paragraph and that it is defined by one topic sentence in that paragraph. Thus, a rhetorically well-structured paragraph which takes a linear pattern may demonstrate a number closer to 1.0 for topic changes and average number of topic sentences in a paragraph" (Cho 1999:25).

3.2.7 Metaphorical vs. straightforward (metaphors & proverbs)

Chinese students like to use metaphors or proverbs in their essays to support their viewpoints. "Chinese writers and philosophers often represent unquestioned support for assertion and display respect for the traditional rhetorical practice" (Hinkel 1999:98). There are two different opinions on this from the West. One is that metaphors are convenient linguistic tools used to communicate and approximate sophisticated ideas, for metaphors not only describe but shape understanding (Scheiderer 2000). However, a different opinion is that Chinese rhetoric lacks argumentative coherence because of its reliance on appeals to history, tradition, and authority and its frequent references to historical and religious texts as well as proverbs, "these phrases, sayings, and allusions are used to ornament and enliven discourse, but to the Western reader they are distractions" (Connor 1996:38).

In Chen's (1997) study, Chinese writers prefer indirectness and rely on metaphors to present their ideas and to make subtle and implied connections between ideas. In contrast, English essays are very direct and formulaic (Wu 2000:154).

Chinese students rely on the traditional and accepted patterns of expression in order to achieve social harmony, Matalene (1985) claimed. She found that Chinese students are fond of fixed patterns such proverbs, idioms, maxims, literary allusions and analogues, and also resort to tradition and to the authority of the past. In contrast, Western readers regard these patterns as clichés, and Western writing teachers would encourage students to write in their own voices using their own words.

In China, one of the important criteria for grading writing is the use of allusion, analogy and proverbs and this usage is rewarded for increasing the beauty of language (Chen 1994). Wong (1992) investigated proverbial reference, contrasting rhetorical use and its contribution to cohesion. The data were from three Chinese students' Chinese and English writing. He found that the participants referred to Chinese proverbs frequently in English as well as Chinese, even though these references and allusions did not help convey meaning well to English readers. ESL/EFL teachers often comment that ESL/EFL students use patterns of language and stylistic conventions that they have learnt in their native languages and cultures. This transfer is not just idiosyncratic variation but involves recurring patterns of organisation and rhetorical conventions

reminiscent of writing in the students' native language and culture (Connor 1996:3).

The facilitation of poetic expression in Chinese students' essays may also be influenced by the analogical nature of Chinese language. The elusiveness characteristic of these poetic expressions makes the understanding of their meanings more open to variation, the situational differences. It always allows or even encourages more than one understanding of what it says: "Our metaphors systematically shape the way we talk and write, provide patterns for what we can and cannot do in argument. These structures are deeply ingrained, and, may vary from culture to culture" (Tucker 1995:181). Whether it is good or not to use metaphors and proverbs is open to debate, but this is one of the areas where contrastive rhetoric difference can be shown to exist.

3.2.8 Explicit discourse markers (marks of coherence and unity)

English essays use explicit discourse markers to signal relations between sentences and parts of texts. These devices are words or phrases that act as signals to the reader in order to help the reader make connections with what has already been stated or soon will be stated (Connor 1996:83). These are also called logical devices which include those of addition, comparison, contrast, result, exemplification and so on. It is through devices such as these that the writer is able to organise his ideas and to help his reader follow him from one sentence to another (Byrne 1979:1).

Writing with cohesion involves employing the various linguistic means by which the parts of any written text are made to relate to one another and to constitute a continuous and organised whole (Wingard 1985:139). A connective, in this approach, is a signal of a relationship which the text producer has sought to establish between stretches of text, and a cue to the reader/listener to relate two stretches of text in a particular way (Malmkjaer & Williams 1998: 42).

English readers expect and require landmarks of coherence and unity as they read. They believe that the writer needs to provide transitional statements (Connor 1996:20). They think that weaker writers are less able to provide explicit structural information for reader interpretation; that is, less-skilled writers are less considerate of the audience—perhaps because they are less aware of the audience (Hillocks 1986).

However, lack of cohesion in writing is a problem that plagues many ESL/EFL students (Liu 2000). This results from many factors one of which is misuse or insufficient use of functional connectives. ESL/EFL students may fail to realise the function of logical connections between the ideas they are expressing; or conversely, they understand the connections but may convey them in their L1 structure that is unfamiliar and frequently not understood by their professors (Bliss 2001). Scarcella (1984) reported that her L2 subjects' orientations were longer and contained fewer and a smaller range of attention-getting devices (cited by Silva 1993:66). This lacking of transitions is found not only in Chinese students' essays but also in Japanese. In their culture, the reader is expected to piece sections together to make a coherent text (Connor 1996:20).

"How do such coherence-making contexts operate in languages other than English? Would it be possible, for example, to provide a comparable utterance in a comparable context in Mandarin, or would the discourse constraints on Mandarin require a different way of encoding the implications of the utterance? The interesting questions, then, do not lie in the syntactic structure of the utterance itself, but in the way in which implicature is encoded in coherent text" (Grabe 1998:182-183).

The answer to this might be that in Chinese, the beauty of writing is believed to lie in delicacy and subtlety, not in its straightforwardness (Shen and Yao 1999). This underlying attitude toward writing has typically a manipulative effect on the way textual information is organised and techniques employed to implement the writing task. The Chinese language places emphasis on meaning coherence rather than form coherence. As long as ideas are flowing, it does not matter whether there is or there is not coherent form or connectors, as the proverb goes "Every river flows into the sea".

3.2.9 Summary: writing conventions and culture

To sum up, ESL/EFL writers are subject to influences of writing conventions of their own cultures. The reasons for these are:

- ESL/EFL writers are members of some culture or society and bring various cultural experiences with them to their writing and reading experiences

- As members of some culture or society, ESL/EFL writers have been enculturated in particularly specific ways with regard to language use in a variety of contexts
- As such members, ESL/EFL writers have also learned discourse conventions of some other culture or society
- As such members, ESL/EFL writers may also encode meaning in ways that are different from that of the target culture.

Language teaching may not be successful if the underlying culture in L1 is not addressed, or contrasts between the two writing structures are not made sufficiently explicit. Students need to know not only the forms, but also the cultural constraints associated with the forms and the consequences of selecting a particular form. Understanding those contrastive aspects of two cultures may constitute the first step for ESL/EFL students to attain vital sensitivity to common errors traceable to their first language and culture. Approaches like contrastive rhetoric provide a mechanism through which the native-English-speaking teacher may gain access to some understanding of the problems faced by non-native speakers trying to master the generation of coherent and cohesive text as a second language (Kaplan 1990).

In this chapter, the relationship between language and culture has been discussed. As culture is closely linked with language, it has become apparent that culture teaching needs to be integrated with language teaching. In addition, contrastive rhetoric has been used to identify the cultural differences between the Chinese and English thought patterns and ways of expression. As for removing these

cultural barriers, the constructivist learning theory will now be explored as the basis for using multimedia to solve these problems.

CHAPTER FOUR

CONSTRUCTIVISM: THEORY OF LEARNING

If the problems outlined in the next chapter (lack of cultural knowledge, different rhetorical styles) are to be ameliorated for the overseas students, it is necessary to identify an appropriate learning theory to underpin the development of teaching materials and define teaching methodologies. As will become obvious, Constructivist learning has emerged as a prominent theory (Collis 1999), which is particularly related to the introduction of new media and methodologies within the context of computer-based language and culture learning.

Constructivist theory (Piaget 1973) views learning as the result of mental construction, indicating that people learn by fitting new information together with what they already know and they learn best when they actively construct their own understanding. In constructive thinking, learners are given the opportunity to try out ideas and hypotheses and to invent their own solutions. They assimilate new information to pre-existing notions and modify their understanding in the light of new data. In the process, their ideas gain in complexity and power, and with appropriate support they develop critical insight into how they think and what they know about the world as their understanding increases in depth and detail.

Constructivism emphasises that it is the learners' processing of stimuli from the environment and the resulting cognitive structures that produce adaptive

behaviour, rather than the stimuli themselves. Learner autonomy and initiative are encouraged. Constructivism now represents the dominant paradigm in educational multimedia design, has a strong base in cognitive psychology and provides a more "liberating" view of the learner which fits well with the opportunities offered by hypermedia technology (Boyles 1997:83). Constructivists believe that certain activities and environmental enrichments can enhance the meaning-making process, such as active learning using visual and auditory modalities, creating opportunities for dialogue, fostering creativity and providing a rich and engaging learning environment. For example, Duffy & Jonassen (1992) assert that today's practice of educational technology should indeed be couched in the constructivist paradigm, in terms of developing systems that are situated in the real world and are as experiential as possible. The goal is to design and present authentic learning opportunities in which individuals have the freedom and the opportunity to ground their experience in a manner appropriate to them.

There are two main schools of thought within this theory: cognitive constructivism and social constructivism. Bruner and Piaget are considered the chief theorists among the cognitive constructionists, while Vygotsky is the major theorist among the social constructionists. Cognitive constructivism is about how the individual understands things, and social constructivism emphasizes how meanings and understandings grow out of social encounters (Atherton 2002).

4.1 Cognitive constructivism

Cognitive constructivism postulates that there are mental structures that determine how data and new information are perceived. If the new data make sense to the existing mental structure, then the new information is incorporated into the structure. If the data are very different from the existing mental structure, the new information is either rejected or the information is assimilated so that it will fit into the structure (Sushkin 2002).

Piaget's cognitive constructivism focuses on the individual development of understanding. The learner perceives new relationships among the parts of a problem. The learner selects and transforms information, constructs hypotheses, and makes decisions, relying on a cognitive structure to do so. Piaget highlights the need for learning to be meaningful to the learner and it emphasizes the role of the learner in constructing his/her own model of the topic being learned. Each student is different and brings to the learning process different cognitive abilities and previous experiences. Consequently students must be taught individually and learn those things they see as relevant to their own needs. Each student should be taught at his or her own rate, and be involved in decisions about what is to be learned and should be encouraged to cooperate in the learning process. As each individual will never have exactly the same environment or experiences, people will never form exactly the same understanding of reality (Jonassen, 1991).

Central to Piaget's cognitive constructivism is "schema theory" which asserts that all human beings possess categorical rules or scripts that they use to interpret

the world, with new information processed according to how it fits into these rules or schemas. These schemas can be used not only to interpret but also to predict situations occurring in our environment. The learner in schema theory actively builds schemas and revises them in the light on new information. Each individual's schemas is unique and dependent on that individual's experiences and cognitive processes. Knowledge in schema theory is meaning-driven and probably represented propositionally, and these networks of propositions are actively constructed by the learner (Widmayer 2002:1). Schema theory lays out a picture of how people organise a great amount of background knowledge which they accumulate about the world by organising them into mental units called "schemas." When people learn, when they build knowledge, they are either creating new schemas, or linking together pre-existing schemas in new ways (Engines for Education 2002).

Schema theory also stresses interactions between existing cognitive structures and new experience.

> "As we interact with our environments, we will undoubtedly encounter phenomena that are inconsistent with our constructed knowledge of the world. As we process new information into a coherent system, it is done in one of two ways: when it is consistent with our pre-existing schema it will be assimilated; when it is inconsistent with our pre-existing schema it will be accommodated. Assimilation is the adoption of new information that fits into a pre-existing view" (Piaget and Inhelder, 1973:73).

In addition, schema theory also suggests that there is not just one body of knowledge available to learners at any given stage of development, but rather a network of context-specific bodies of knowledge that learners apply to specific situations. In that sense, schemas are important in decoding how that information is presented and the way information is presented can be culturally determined.

Therefore, an important implication of schema theory is that the design of instructional materials should be organized according to the structures that students may already be familiar with so that they can fit into students' mental organization. Another implication is that designers should employ strategies such as multi-layers to facilitate students' recall of related material, such as using analogies to draw connections between what is already in their minds (Widmayer 2002:3).

Bruner (1971) also claimed that we construct new knowledge based upon our current knowledge; the process is ongoing, where we continually build upon what we have already learned. In this process we continually acquire a better understanding of our external world; it is a dynamic and successive process (Bruner 1986). He maintained that people interpret the world in terms of its similarities and differences which are detected among objects and events and put them into a heirarchial arrangement of related categories. Objects that are viewed as similar are placed in the same category. The act of categorizing is assumed to be involved in information processing and decision making. Bruner emphasized the formation of categories and believed that the systems facilitate transfer, enhance retention and increase problem solving and motivation. Bruner's major

theme in cognitive constructivism is that learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge. Cognitive structure (i.e., schema, mental models) provides meaning and organisation to experiences and allows the individual to "go beyond the information given" (Kearsley 2001).

These constructivist views of learning and cognitive development provide an important theme in understanding the design of multimedia language learning environments with learners viewed as active constructors of their knowledge of the world (Boyle 1997:10). Based on these assumptions, educators need to provide learning environments that capitalize on inconsistencies between the learners' current understandings and the new experiences they encounter. Learning environments, then, should be designed to challenge understandings. While learners should be encouraged to compare conflicting ideas, they should also discuss conflicting views based on their existing knowledge as they try to accommodate new knowledge that is internally inconsistent. Activities require learners to compare and contrast similarities and differences (Perkins, 1991) and they have to be arranged to meet individual students' needs.

Papert (1980), who worked with Piaget, subscribes to this view and has argued that educational software must be designed to help develop students' thinking. In particular, he applied this argument to the development of the programming language LOGO, which he claimed can develop mathematical thinking because LOGO provides a culture which helps to make abstract mathematical concepts simple and concrete so that the student can relate them to his or her existing

knowledge and fit them into previously developed knowledge structures. Papert's work was also influenced by the way in which children learn to talk, a process which happens without any formal, organised learning, and which is fostered by the environment.

Papert's claims for LOGO being helpful in the development of high level thinking skills and abstract thought have been extensively evaluated and Littleton (1994) summarises the main three points as being, first that programming in LOGO does not necessarily lead to better problem solving capabilities; second, any cognitive gains are more likely to be found when LOGO activities are carefully structured by the teacher; and third, that the experience of working with LOGO has a profound effect on students' social interactions. This last finding about the social effects of LOGO was one of the early findings that has been supported by later research and has led to the more recent use of constructivist theory in education, which suggests that there will be benefits from group use of computers. Lou et al (2001) indicate that this is a central question when evaluating the use of computer technology (CT) in education:

> "One of the instructional strategies concerns social context; specifically, whether students learn with CT individually (i.e., with one computer per student, each working on his or her own task) or in a group (i.e., with two or more students per computer on the same task in a face-to-face setting, or two or more students collaborating on the same task synchronously or asynchronously over a distance)." (Lou et al, 2001:1)

When two or more students work together there is the opportunity for socio-cognitive conflict, a central idea of Piagetian psychology, which suggests that when one student works with another who holds a different theory, or model, s/he can point up discrepancies in the first student's ideas. It is argued and that discrepancies between students (socio-cognitive conflict) are more powerful than the impact of discrepant models within the same individual. Therefore, by encouraging collaboration, computers can provide a good medium where such conflicts can be provoked in order to facilitate learning.

However, collaborative learning with computers need not always involve the idea of such sociocognitive conflict and this has led some researchers to focus in particular on the kinds of language that students use when working with computers, and believe that a more satisfactory theoretical base for looking at collaborative work with computers is provided by Vygotsky, who emphasised the role of language and social context.

4.2 Social constructivism

Piaget believed that language is important, but it is tied into the general course of cognitive growth: language does not in itself create thought, although language acquisition is dependent on certain intellectual structures. However, it has been argued that Piaget very much under-emphasised the role of language.

For Vygotsky, language plays a special role in learning and development. By acquiring language, a child is enabled to think in new ways and gains a new

cognitive tool for making sense of the world. "Children solve practical tasks with the help of their speech, as well as their eyes and lands (Vygotsky 1978:26).

Language is used as an additional tool in solving problems, to overcome impulsive action, to plan a solution before trying it out and to control behaviour. However, the main function of language is social. Unlike Piaget, Vygostsky places the origins of learning firmly in a social context. The whole thrust of Vygotsky's argument is that cognitive development is socially located, and that individual learning follows social learning. The significance of symbols is first understood socially, and then may be individually applied.

Although this is still a constructivist view, the thrust is quite different from Piaget's with the social context seen as being crucial, as is language which is interrelated with action. Vygotsky's work is therefore viewed as particularly relevant for those who are concerned with the use of language, as in the Spoken Language And New Technology Project (Mercer et al, 1991) which asks: what kinds of opportunities for talk are provided by computer-mediated activities? Here the educational process is viewed as a communicative process whereby knowledge is constructed, shared, interpreted and misinterpreted as teachers talk with students and students talk amongst themselves (Mercer, 1991:195-196).

The social nature of learning as constantly emphasised by Vygotsky is currently accepted as a very important aspect of learning and a related idea, which has recently been very influential, is that all learning takes place in a particular context. Knowledge is also seen as embedded in a context and neither can be

viewed as separate from that context. This is often referred to as "situated cognition".

The two constructivist theories are a continuum, moving from the individualistic approach of Piaget to the communicative theory of Vygotsky. This move reflects a shift in the dominant theories in the field of cognitive development and learning, where individualist theories of development and learning have given way to more socially and culturally sensitive views of cognition.

> ... in which theorists are beginning to stress an inextricable link between contextual constraints and the acquisition of knowledge. Moreover the physical context is being united with the social, with the thought process. The contemporary view tends to be that cognition is typically situated in a social and physical context and is rarely, if ever, decontextualised (Butterworth 1992:1).

Brown, Collins and Duguid (1989) focus on the separation between knowing "formal" knowledge and its use in context, in their discussion of situated cognition:

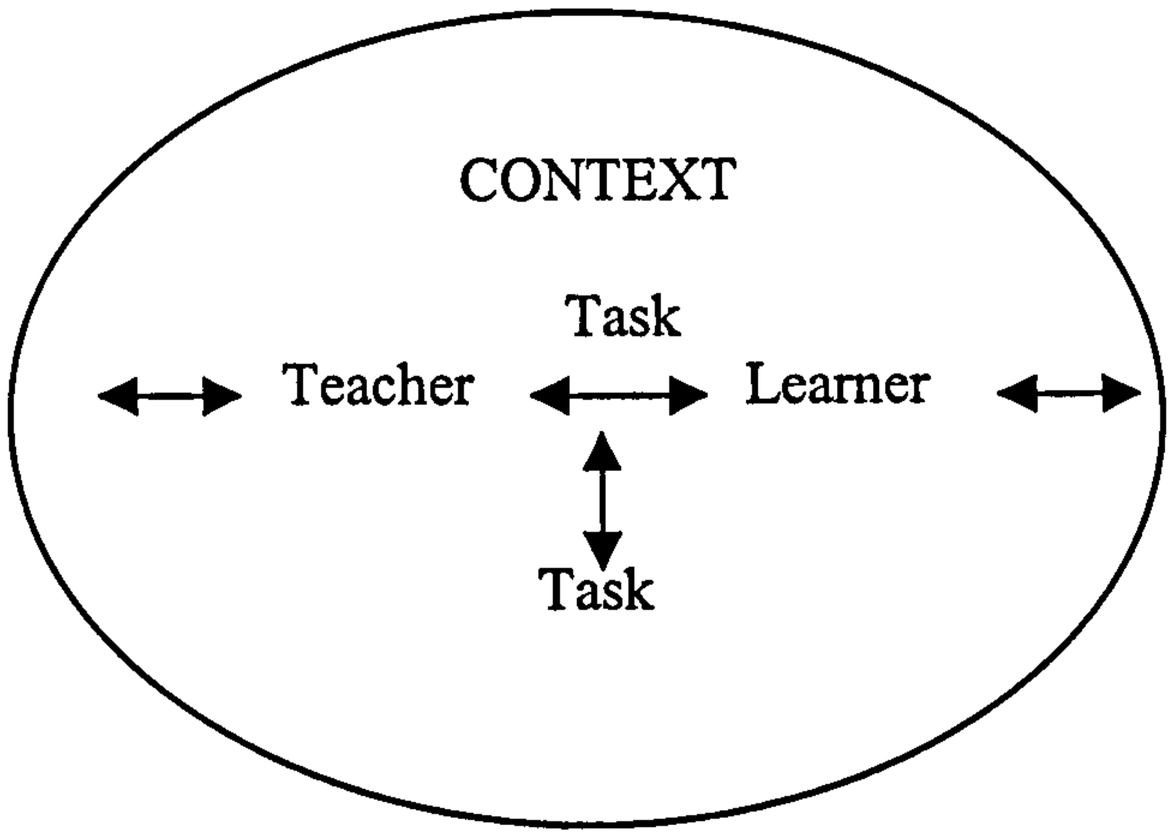
> Many methods of didactic education assume a separation between knowing and doing, treating knowledge as integral, self-sufficient substance, theoretically independent of the situations in which it is learned and used. The primary concern of schools often seems to be the transfer of this substance, which comprises abstract, decontextualised formal concepts (Brown et al, 1989:32).

Interestingly, in parallel with the changes in the emphasis in theories of learning, changes have occurred in the kinds of learning activities that students are engaged in when interacting with computer technology. There has been a move from individual to collaborative working, both when using software which has not been designed for group use, such as using computers for problem-solving activities and in making use of computer networks and computer conferencing. Such collaborative use of computers has also increased across the educational spectrum: in schools, as well as higher and distance education. This is consistent with the increasing emphasis on social interaction which is occurring in adult learning, and an increasing recognition of the situated nature of learning.

Social constructivists propose that people, through interacting with the world, construct text and refine cognitive representations to make sense of it. Learning rather than instruction becomes the focal issue (Boyle 1997:70). Social construction emphasises the dynamic nature of the interplay between teachers, learners and tasks, and provides a view of learning as arising from interactions with others. Since learning never takes place in isolation, the importance of the learning environment or context within which the learning takes place should be recognized.

Four key sets of factors influence the learning process – teachers, learners, tasks and contexts. However, none of these factors exists in isolation. They all interact as part of a dynamic and ongoing process within the framework of constructivism.

Figure 4.1 A social constructivist model of the teaching-learning process



(source: Williams and Burden 1997, *Psychology for Language Teachers*)

Teachers select tasks which reflect their beliefs about teaching and learning. Learners interpret tasks in ways that are meaningful and personal to them as individuals. The task is therefore the interface between the teacher and learners. At the same time, the context in which the learning takes place will play an important part in shaping what happens within it. This can be represented as a set of concentric circles, influencing each other, with the participants, of course, playing an ongoing part in shaping those environments.

The students must interact with and process the content of the course. The content cannot merely pass before students' senses but must be cognitively processed (Bower and Hilgard 1981). Learning is a social activity: our learning is associated with our connection with other human beings, our teachers, our peers, our family as well as casual acquaintances. Social construction recognizes the social aspect of learning and uses interaction with others and the application of knowledge as an integral aspect of learning. Social construction theory also

examines the degree to which social, contextual, and cultural factors determine our constructed knowledge; specifically, assumptions of how we construct knowledge will influence the emphasis that will be placed on social interaction, group process, and the learning and practicing of socio-linguistic skills. Applying social constructivism to teaching, Inglis claimed that

> "Considered at one level, we can say that teaching should be directed at creating opportunities to develop the ability to act appropriately within a particular domain of action. Considered at a deeper level, we could say that teaching ought to involve providing the contexts in which learners can acquire both the tacit and the conceptual knowledge from which appropriate action arises" (Inglis 1999:30).

To summarise, common to cognitive, schema theory and social constructivism is a belief that new knowledge is constructed based on the existing knowledge in people's mental structures and that learning is an active rather than a passive process. Learning takes place when an individual is meeting his or her needs and, at the same time, learning happens through social contact.

If learning is, as constructivism suggests, a process whereby people actively construct knowledge based on past experiences, then context-rich, long-term learning environments with tools that enhance interactive communication and access instructional methods that provide real-world examples are required. This kind of learning environment will provide learners with experience-based learning opportunities to practice and reflect on the learning process. Moreover, according to constructivist learning principles, in this kind of learning

environment the tasks will reflect the complexity of the real world in which learners must function after the planned learning activities have occurred (Kanuka & Anderson 1999). The importance of creating an active learning environment is recognised by more and more teachers and educators.

4.3 Constructivism and technology

Only recently has it become feasible to consider constructivist principles within the context of technology-mediated higher education. This is due primarily to advances in communication technologies where open-ended environments provide individual students with tools to experiment and build their own learning constructs (Kanuka & Anderson 1999). And as the internet and WWW have matured, communication technologies have the capacity to provide an interactive environment that can support instructional methods required by the social aspects of learning as described by Vygotsky. It is now possible to design educational projects involving distributed but intercommunicating participants.

There is a natural linkage between the constructivist learning paradigm and the utilization of educational technology (Duffy & Jonassen, 1992; Saloman, Perkins & Globerson, 1991; Scardamalia, et al., 1989). Since today's computer systems can be used to communicate, create, inquire, categorize, synthesize and present information, they can be used as a storage and manipulation device for both existing information, and for one's original ideas and creative work. They therefore serve as tools that allow students to build their own mental models.

Computers can also be used to transform information from verbal and digital forms to visual and auditory representations. As such, the use of computers can be a powerful adjunct to teaching and learning for students and teachers alike. More recently, constructivist educators have striven to provide students with access to information "on demand". By accessing information in a variety of media formats and in an interactive fashion, students can make associations with their own explorations through these different technologies and make sense of and assimilate this information in a meaningful way. Due to their design, these technologies are alternatives to the linear structure to much information presentation, facilitating a more broadly defined, amorphous data gathering technique that is again supportive of constructivist learning principles (Dede, 1992).

4.3.1 Constructing meaning

Development and integration of multimedia as well as other computer technologies have been positive steps towards presenting information in multi-format and multi-layers. However, students are often still primarily the passive recipients of information rather than active meaning-makers. Creating support for knowledge construction within the students is a critical component for the success of developing self-motivated, intellectually stimulated learners (Duffy & Jonassen, 1992). The meaning of a text (or other information source) is constructed by reader (or creator), not simply by the author or the curriculum guide author. This meaning, being personal in nature, is thus subject to the reader's experiences. Technologies need to actively engage students with the

information presented (Winn & Bricken, 1992). Here are some examples of how meaning is constructed by the reader with the help of technology:

The ACOT (Apple Classroom of Tomorrow) format of classroom instruction is based on constructivist pedagogy, supported through educational technology. ACOT is a program supported by both Apple Computer, Inc. and the National Alliance for Restructuring Education. The mission of the ACOT program is to "change the way people think about and use technology for learning" (Yocam, Filmore and Dwyer, 1992; Dwyer, 1994). Though the program has sometimes been criticized for conducting most of its own evaluation, some independent research has been conducted that indicates that this and other technology-rich programs have a positive effect on students learning.

The ACOT Professional Development Centre contrasts traditional instruction and constructivist learning in the following fashion.

The table below presents a summary of Apple's perception of the differences between instruction and knowledge construction practices in the classroom.

Table 4.1 - Comparison of Apple's Instruction and Knowledge Construction

Function	Instruction	Construction
Classroom Activity	Teacher-centred; didactic	Learner-centred; interactive
Instructional Emphasis	Facts; memorization	Relationships; inquiry and invention
Concept of Knowledge	Accumulation of facts	Transformation of facts
Demonstration of Success	Quantity	Quality of understanding
Technology Use	Drill and practice	Communication, collaboration, information access and retrieval expression

By providing opportunities for relevant, timely, self-directed study utilizing technology-based instruction, collaborative learning and alternative assessment techniques, the differences in classroom practices and attendance are substantial. Dwyer (1994), in discussing ACOT's approach to the development of critical thinking skills stated:

> In-depth study of a sample of students' thinking processes began to show significant change in the way they thought and worked. . . A four-year longitudinal study showed the greatest difference to be the manner in which they organized for and accomplished their work. Routinely, they employed inquiry, collaborative, technological, and problem-solving skills uncommon to graduates of traditional programs (Dwyer 1994: 6-8).

The positive effects of the program have been far-reaching. As stated by Dwyer (1994), "we watched technology profoundly disturb the inertia of traditional classrooms" (Dwyer 1994:9). Benefits have been found with regard to both student and teacher behaviours. Regarding students, one benefit is the fundamental change seen in the way that students think about their personal learning processes, organize materials and engage in the learning process itself. According to Dwyer and his colleagues, these skills are a direct outgrowth of the integration constructivist learning principles coupled with the daily use of computer technology into the classroom. From their research, ACOT project coordinators have seen a marked increase in the development and application of students' critical thinking skills both in and outside the classroom.

Another example of applying constructive approach with technology is the KCOT (Kellogg Classroom of Tomorrow) Program. It is a planned school reform in the Shoreline School District in Seattle, WA., focusing on assisting students to be life-long learners, who can incorporate the skills gained in the classroom in all environments. The four priorities in this program are

- Teach for Intellectual Development

    1. Critical and creative thinking skills development

    2. Demonstrated competencies in core curriculum

    3. Effective use of technology in the classroom in support of learning

    4. Application of learning skills to relevant, real-life situations

- Make Learning Meaningful

  1. Appreciation of diversity of learning styles and personalities

  2. Appreciation and application of appropriate teaching styles

  3. Giving students the opportunity to own their learning experiences

  4. Developing a passion for life-long learning

- Use Authentic Assessment

  1. Set high standards for self and students

  2. Developing a dynamic approach to a changing world

  3. Demonstrate competencies through performance

  4. Encourage active participation in our democratic society

- Focus on Students Becoming Producers and Contributors

  1. Contribute to others in class and in community

  2. Foster value as an individual and as a contributing member of society

  3. Use learning skills in real-life situations and for real rewards

  4. Interact/team with other teachers and community members.

KCOT places emphasis on long-term, thematic, project-based learning. The KCOT program provides a technology-rich student-centered learning environment of high standards and ambitious objectives. Program-set standards based on state requirements replace traditional grades. Technology and community resources play vital roles in student support.

The individual engaged in learning should have the opportunity to inquire, and to develop understanding from their own and others' perspectives when constructing knowledge. This position is supported by the work of Cunningham (1992), who reported the effectiveness of this approach for helping students learn.

These two examples show that with these new technologies, students can be given opportunities to construct knowledge through their own experiences. There is less emphasis on directly teaching specific skills and more emphasis on learning in a meaningful context and this context helps expand the conceptual and experiential background of the students. Through the processes of assimilation and accommodation, old concepts are adapted and altered to fit a logical framework (Bentley, 1998).

4.3.2 Social interaction

The effects of interactive technologies that are in use today including multimedia and the Internet have been felt deeply within the educational community (Spiro et al., 1992). As knowledge is constructed through social negotiation, discussions with other individuals are a primary instructional methodology. Small discussion groups in a risk free environment, brainstorming and categorizing, and debriefing are examples of instructional methods that can allow learners to examine their understandings through other individuals. Learners should also be encouraged to test their ideas against alternative views and alternative contexts. Consistent with cognitive construction, other people are considered to be the greatest source of

conflict that stimulates new learning. Cooperative learning creates an opportunity to form communities of inquiry that provide learning environments that encourage critical dialogue and, hence, understanding (Vygotsky, 1978).

Technology provides essential tools with which to accomplish the goals of social constructivism. Below are a few examples of the way information technology can support social constructivist teaching and learning:

Telecommunications tools including e-mail and the Internet provide such interactivities as dialogue, discussion and debate that leads to the social construction of meaning. Students can talk with other students, teachers, and professionals in communities far from their classroom. Telecommunications tools can also provide students access to many different types of information resources that help them understand both their culture and the culture of others. Students can write for real audiences who respond and participate in a collective writing activity. Simulations can make learning meaningful by situating something to be learned in the context of a "real world" activity.

Technology can also be useful for multiple dimensions of knowledge representation with multiple interconnections across knowledge components. The emphasis on learning in this view capitalizes on the students' need to create interpretations and actively struggle with a variety of opposing understandings (Cunningham, 1991; Perkins, 1991). Small discussion groups following the presentation of each view on the topic would enable the learner to explore and understand multiple perspectives of the content. In the end, the goal of instruction

is to help the learner understand multiple interpretations of reality, rather than to assure that the learner knows `the' reality (Cunningham, 1992).

The implication of technology assisting constructivism in learning is interconnections: interconnect the individual with groups, interconnect students with course content, interconnect activities with problem solving and interconnect facts with new understandings.

Much of what has been described thus far with regard to constructivism and technology has painted the technology and its application in a positive light, and research has indicated that there is indeed perceived value to be added (Dede, 1992, 1994; Dede, Salzman & Loftin, 1996; Winn, 1992).

However, the practical side of multimedia as a learning tool has a component, that is appropriateness, which needs to be substantively addressed if multimedia is to actually become a practical reality in language and culture learning. The technology must be appropriately used by the user from a cognitive, schema and social constructive sense. Otherwise, individuals may be precluded from utilizing the technology due to complexity or knowledge barriers. After all, it is the teaching pedagogy that functions with the help of technology, not the other way round. Although constructivism, as the theoretic base and multimedia, as a tool for interactive environment, have been discussed in theory, their application to language and culture learning (particularly in this study) still need careful planning. In the next chapter, the cultural barriers will be specified and possible application of constructivism to remove these cultural barriers is dealt with.

CHAPTER FIVE

SPECIFICATION OF CULTURAL BARRIERS AND APPLICATION OF CONSTRUCTIVISM TO REMOVE THESE BARRIERS

In this chapter, a general picture of overseas students' cultural barriers will be presented both in the practical aspect, such as cultural shock, and in the intellectual aspect, namely academic writing.

5.1 Cultural barriers of a practical nature: cultural shock

Moving to and staying in a foreign country involves innumerable challenges and changes (Erin 2001; Coe 2001; University of Waterloo 2001; Guanipa 1998). Some of these barriers are associated with English language proficiency, some with the need to adjust to the host country's academic culture (Rao 1979), and some are associated with living in a new community culture. "There is school trouble, language trouble, house trouble, transport trouble and shopping trouble" (University of Rochester 2000-2001). The barriers come from not knowing what to do or how to do things in a new environment, and not knowing what is appropriate or inappropriate (Guanipa 1998:1).

While feelings of frustration and anxiety, the shedding of illusions, and a sense of a loss of identity may be an inevitable accompaniment to this part of the learning process, many students do not progress beyond this point, and remain consistently depressed and negative in their responses throughout their stay

(Livingstone 1960:3). Most of the research so far has suggested that high expectations that cannot and are not fulfilled are related to poor adjustment and increased mental illness (Cochrane 1983:97). This is what is called "Cultural shock".

The term, cultural shock, was introduced for the first time in 1958 (Guanipa 1998:1) to describe the anxiety produced when a person moves to a completely new environment. In the early 1960s, the anthropologist Oberg (1960:176) noticed the phenomenon of culture mismatch that overseas students met and pointed out that "Cultural shock is precipitated by the anxiety that results from losing all our familiar signs and symbols of social intercourse" (Furnham 1997:15; Furnham and Bochner 1986; Ward 1996:124). Cultural shock concerns people's experience that can cause "intense discomfort, often accompanied by hyper-irritability, bitterness, resentment, homesickness and depression" (Coe 2001:11). Cultural shock begins when one feels anxious or tense due to loss of familiar customs and social interactions. The study of cultural shock focuses on the differences between home country and host country.

Survey data collected in the 1960s, from overseas students who were asked to comment on their reactions to Britain, showed that negative and unfavourable comments were six times as frequent as favourable ones (Furnham 1997:13) and suggested that problems facing overseas students are threefold: problems of living in a foreign culture; problems of late-adolescents; and the academic problems associated with higher educational study (Furnham 1982:368).

What makes the overseas students feel more alien is that people in the host country are largely indifferent to all these troubles. They help but they don't understand the great concern of the students over these difficulties. It is difficult for the Western teachers to imagine how the world of the university appears to a student coming from a cultural background that includes not only a language very different from English but also a way of viewing the world that differs greatly from the expectations of the university discourse (Basham 1991:37). Communication difficulties may occur and there may be feelings of discontent, impatience, anger, sadness, and feelings of incompetence, when a person is trying to adapt to a new culture.

5.1.1 On arrival

The moment of arrival is of much significance in that it is the time when overseas students move from everything familiar to everything unfamiliar. "When we enter a strange culture, we are like a fish out of water. No matter how broad-minded or full of goodwill we may be, a series of props have been knocked from under us. This is followed by a feeling of frustration and anxiety" (Interview with students by University of Rochester 2000-2001).

5.1.2 Transport

Overseas students take as many belongings as they can with them to move to a new country because of the uncertainties associated with their new environment, and this can lead to immediate cultural shock when they are immobilised by their

lack of knowledge about the host country. "Anyone who has witnessed the amount of luggage which a single student can transport and is familiar with the complex business of getting from airport to institution will appreciate the need for dedicated transport" (Humfrey 1999:81).

A personal anecdote illustrates one of the problems associated with a basic lack of knowledge about transport in the UK:

Two Chinese students arrived at Hull Railway Station in September 2000. As they thought the taxi at the station would be more expensive (which is the case in China), they walked out on the main street and waved vigorously whenever they saw a taxi passing (in China this is the procedure to stop a taxi). Taxi drivers did not pay any attention to the students. With little hope of stopping a taxi in this way, they went to a bus-stop. In China, all the stops of a bus are on the sign at the bus stop, but in the UK only the bus number is given. So the students couldn't get on a bus because they didn't know which bus to take. They knew the words "taxi" and "bus", but didn't know how they operated in the target culture.

5.1.3 Registration

Humfrey (1999) also points out that students are puzzled by the need to register with the police in order to meet specific immigration requirements in the UK, who claim that "We haven't committed any crime. Why do we have to register with the police?" Registration with the police is a compulsory procedure for

overseas students and many students cannot understand that requirement because they do not have to do so in their home country.

Bank registration soon after arrival is also necessary because changing large sums of foreign currency into English sterling is a complicated procedure. They may lose money due to commission and rates if they are not doing it in the right way.

Registration with a GP is also important. Britain is known in many parts of the world as a country with an enviable level of healthcare freely available to all its citizens. Cultural shock may produce homesickness, anxiety, isolation and these can all present symptoms of headaches, sore throats or digestive problems requiring access to doctors and nurses.

5.1.4 Accommodation

All students regard residential accommodation as a high priority (Humfrey 1999:91). Good accommodation in a comfortable and relaxing environment is an important prerequisite for settling down to study. This is particularly important for overseas students because their accommodation will be their home during their studies. However, an early study (Livingstone 1960:6) indicated that it is around the question of accommodation that the anger of the overseas students is often most fiercely expressed. Many overseas students assume that the offer of a place in a university automatically means the provision of accommodation. A survey of students at Loughborough and Nottingham Universities found that

twenty-three per cent of newcomers had received no information on accommodation prior to their arrival. It was also found that a significant number of students at both universities arrived from overseas expecting accommodation to be made available by the university and finding no such provision. The research further demonstrated that a large number of students indicated that their difficulties with accommodation had adversely affected their ability to settle to their work and that problems and worries over accommodation, compounded by indifferent attitudes from university staff, de-motivated students and could induce depression (Channell 1990:89).

Students need to understand the differences associated with:

- University-owned halls of residence;
- University-owned flats or houses;
- Private sector accommodation.

Students need to know:

- whether any or all are self-catering;
- what facilities are provided;
- what they are expected to bring with them;
- whether the rooms are single occupancy;
- what the bathroom facilities include and whether they are shared;
- whether the accommodation is single-sex or mixed;
- whether the accommodation is on-campus or at some distance

Humfrey (1999) suggests that students have to have some background knowledge of the geographical region, the legal system relating to tenancy and licence, some understanding of the British halls of residence, and even some knowledge of central heating and urban garden maintenance. They will also need to know the cost, both of the accommodation on offer and of the extra requirements. Only when the problem of accommodation is resolved can they begin to settle down and study.

5.1.5 In-class behaviour

After having registered with the university, having found a place to live, the overseas students can now go to class. However, what they find in class may be different from their experience in their home countries.

According to Grabe & Kaplan (1998), overseas students are likely to misunderstand class interactions, teacher talk, and given assignments; they may have difficulty participating in class, and often misread non-verbal cues which cause numerous attitudinal conflicts because they are not able to rely on native speaker intuitions when using language.

Eastern students expect lecturers to talk more, but more often than not, the lecturers organise group discussions and give students the chance to talk, with group discussion constituting a large part of student class activities in the UK. However, the students seem unwilling to speak and are passive and rather resistant to pair or group work. When their opinions seem to run counter to what

others in the group are saying, Eastern students will not express them. These students also find it difficult to express any negative comments forcefully, so their remarks may be considerably toned down (Nelson 1995). They seem oriented to exams and memorisation, but not to the processes of learning. This is not to say that Western teachers in general do not have positive attitudes towards Eastern students, who are seen as hardworking, well-motivated, and friendly (Pearson 1998).

Chinese EFL learners, for example, are usually described as quiet learners (Volet & Renshaw 1996, Lee 1997). Their quiet behaviour is a sign of a learning attitude which reflects respect for teachers and classmates, rather than a sign of withdrawal from learning (Lee, 2000). Their silence was found to have formed when very young. Woodrow & Sham (2000) looked at pupil study preferences in three Manchester school settings: Independent, Grant Maintained and Comprehensive. Questionnaire responses were collected from 150 Chinese and British-Chinese pupils and 200 British-White pupils, interviews held with 65 Chinese and British-Chinese pupils and 35 British-White pupils, and case studies carried out with five Chinese families. British Chinese pupils much preferred working alone than in groups and did not like being asked, or asking questions and did not value peer discussion. British Chinese pupils found their teachers kind, friendly, caring and helpful, whereas British-White pupils described the same teachers as moody, easily annoyed, boring, and unintelligent. British-White pupils preferred problem solving and making up their minds on issues, enjoyed discussion, and didn't mind asking and being asked questions. These and

other significant differences identify distinctive cultural learning preferences and attitudes to learning and schooling.

This silence or hesitation is not only confined to Chinese students. Pritchard (1995) shows how an English teacher with considerable experience found teaching difficult in her class of Japanese students. She found that Japanese learners are reluctant to participate in conversation sessions, reluctant to look the teacher in the eye, to answer questions or express an opinion, and even reluctant to respond to praise. This is because in Japanese society, group membership and solidarity is regarded as more important than individual identity. The Japanese value conformity to the group believing that "real friendship means total acceptance by the group" (Richards and Sukwiwat 1985:139). Many Thais follow the quiet attitude of the Chinese and Japanese and will not express disagreement unless absolutely certain that they are correct with respect to the point in question. Thais view disagreement with another as a personal matter. It is not something to be displayed in public. They are often surprised when they see Americans vigorously disagreeing or questioning each other's opinions in a class or conference, and then cordially chatting or sharing a drink outside the meeting room. Indians start this silence as early as primary school with Indian children mostly remaining silent, not responding to direct solicitations to display their knowledge in public, and not vying for the attention of the teacher (Kramsch 2000:48). This reflects a general pattern in Asian culture, according to Patten (1998: 150) "Asians put more emphasis on order, stability, hierarchy, family and self-discipline than Westerners do".

Western students, on the other hand, might be comfortable using group input for individual gain (Nelson 1995).

> An individual who displays views and opinions that are at variance with commonly held beliefs is seen as having an independent mind. Disagreement is regarded as an essential element in situations where information and attitudes are exchanged or discussed, such as at meetings or conferences (Jordan 1997:10).

Western teachers, in general, attempt to involve students in active discussion. They expect students' participation which will include a critical evaluation of texts, revealing students' independent thinking (Cortazzi and Jin 1999:215).

In the Western culture, the aims of group discussion are:

- to promote critical and logical thinking
- to aid students in solving problems or making applications of theory
- to extend studies to topics beyond those covered in lectures
- to widen interests
- to change attitudes (Jordan 1997:10).

Overseas students' difficulties in group discussion are:

- lack of self-confidence
- shyness
- unwillingness to begin

- lack of knowledge of the subject
- cultural reluctance to promote personal attitudes
- unwillingness to express negative comments
- preference for group solidarity rather than individual identity

5.1.6 Socialisation

The experiences of overseas students in Britain are not restricted to their academic studies. They also have to live within their host country (Lewins and Habeshaw 1990:103), and they know more about the foreign culture by mixing with the local people and by socialisation with them. Modes of communication are socio-culturally shaped and cultural differences, therefore, often become potential sources of miscommunication as participants make sense of their interactions by using different interpretative frameworks. It is especially true of intercultural communication where the problem for intercultural understanding becomes a problem of incommensurability between sets of rules, and where people's behaviour does not seem to conform to existing values, beliefs, roles, and expectations (Cortazzi 1990). In intercultural communication, conflicts become inevitable in spite of the good intentions of all participants. Disparities in interpretation are likely to lead to different understandings and expectations in the interactional process in which different participants create, relate, organise and realise meaning.

In China, as well as in many other Eastern countries, students share accommodation, dinning-hall and sports fields. As a result, they have plenty of

chances to meet and communicate. While in the UK, they have to do practically everything on their own. When they ask "How do we socialise?" the answers from their English friends are always "the pub". "The pub is an important part of social life and functions as a social centre in many university residences". "British students have a penchant for the pub and disco as the basis for their socialisation, and these venues were found not to be of interest to many overseas students" (Lewins 1990:103).

English teachers also discovered that Eastern students have a different mode of socialisation. "Eastern concepts are very different. Students are single-mindedly seeking qualifications. It is not just that they don't have time to socialise – they regard social aspects as irrelevant and of no consequence" (Lewins and Habeshaw 1990:103). For example, "Many Eastern overseas students took organised sport very seriously as a way of keeping fit rather than as a relaxation or in a social context" (Lewins and Habeshaw 1990:103).

Overseas students experience many disadvantages that are not always recognised by their teachers: they do not have a full range of host country cultural experiences (e.g. TV, sports, holidays, political system, economic system) and they are perhaps often painfully reminded that host country people know, and want to know, very little about their cultures (Grabe and Kaplan 1998:249-250).

5.1.7 Mismatch of expectations between teacher and student

A mismatch of expectations between the teacher and students may lead to problems. In Eastern culture, a teacher is regarded as model who perfects the virtue of students and assists in the development of their talent, answers questions, and cultivates his/her own virtue and learning while encouraging students to do the same (Scollon 1999: 19-20). "A teacher was the only profession which was considered to be nearly as important as one's parents. Teachers in such a superior social status enjoyed high esteem. In order to sustain such status, requirements of the teacher, both in moral and academic standards, were extraordinarily high. Although teachers might not receive much in terms of income, they received wide respect from people, and their students were expected to follow the teachers' teaching strictly" (Elsey 1990:71). A teacher is accepted as a sage and a student is expected "to be seen" rather than "to be heard".

Socialised with strong and, usually, consistent views of how their teachers and they themselves should behave, Chinese students still expect that teachers in the UK, like their parents, will show sufficient care and concern, be aware of students' problems and to offer help unasked (Schneider and Fujishima 1995:19). Not seeing evidence of it, they conclude that they are unlucky to have a poor teacher who is not teaching in expected ways (Cortazzi and Jin 1999:213).

Mainly, overseas students' dissatisfaction with Western teachers centre around two aspects: few contacts and less concern. In a study of approximately 4,000 East African students studying in the UK, Currie and Leggatt found that 25 per

cent of the students said that they had never had a conversation with a member of staff outside teaching periods. 17 per cent found members of the academic staff either too aloof or too busy to be easily approachable and 22 per cent felt that the advice available to them on personal matters was inadequate (Lewis 1984:98). Some staff are obviously quite good at creating an impression of being very busy, and hence discouraging students from doing what the staff have in fact encouraged them to do "come and see me whenever you have a problem". Individual tutors tend to make excuses about how busy everyone is at the beginning of the academic year, just when help is needed (Channell 1990:72).

Burns (1991) discovered that most students felt staff were hardly aware of their problems, whether academic, social, emotional or health-related, and lacked interest in helping them (Todd 1997:178). Similarly, Elsey (1990) found the expectations and needs to an even greater degree among research students, who had in their minds a picture of the ideal supervisor providing "considerable structured guidance, complete with comprehensive feedback through regular tutorial discussions" (Elsey 1990: 55). The students wanted directed reading and felt that there was no reason why their supervisors could not draw up a short list of essential reading and development at the beginning. Others at a later stage in their research largely agreed with this view although they felt that there were merits in broader reading at the beginning to which they might return later—but they generally felt that a more directed approach to the literature would avoid the experience of feeling that the first six months were wasted and the anxiety and sometimes desperation felt by a few at the end of this time (Channell 1990:68).

Criticism was made of the lack of or limited personal attention and guidance given by some academic staff (Barker 1997:117).

The following table might summarise the mismatches in expectation, leading to misinterpretation of the other's behaviour, as a cause of barriers in the student-tutor relationship:

Table 5.1 Different perceptions of teacher and student roles in higher education: Chinese students and British teachers (Cortazzi & Jin 1997:85)

Student view of teacher roles	*Teacher view of teacher roles*
be an authority, expert	be a facilitator, organiser
be a model: knowing that, how to	be a model of how to find out
be a parent, friend	be a friendly critic
know students' problems	
give answers, clear guidance: teach us what to do	
Student view of student roles	*Teacher view of student roles*
develop receptivity, collective harmony, apprenticeship, deductive learning	develop independence, individuality, creativity, inductive learning
respect teacher: learn by listening and reflection	participate: engage in dialogue
learn methods, technical advances	develop critical thinking
focus on product, result	focus on process of learning, research skills
	ask if there are problems
	find own answers
	should know what to do or work it out

These culturally-based expectations, derived from social norms and communication rules, inter-group attitudes and stereotypes, are rarely explicitly articulated. However, both teachers and students judge the appropriateness of their actions on the basis of these expectations. Unfortunately, as Burnaby and

Sun (1989:229) pointed out "Cultural gap: Easterners don't think in the way most Westerners think." Cultural shock is a useful shorthand descriptor which summarizes overseas students' reactions after they lose the security of familiarity. This inability to face situations in familiar ways, and the continual need to grope for new behaviours, which will more effectively meet the student's needs, inevitably leads to fatigue, discomfort and frustration (Brislin 1981:155).

5.2 Hidden cultural barriers

If the barriers of a practical nature are relatively easily observed, the second kind of barrier is less obvious but more important: the intellectual barriers in academic writing. Academic writing is complex because it involves more than grammar; it involves more than control of the English language; it involves familiarity with the writing conventions of the university culture and disciplinary subcultures in which the second language learner participates (Schneider and Fujishima 1995:4). "While a student is inducted into a particular discipline through lectures, discussions, readings, and laboratory work, it is through written assignments that the success of his acculturation is most commonly judged" (Ballard 1984:43). Academic writing includes both the written coursework, exams, and theses of students in higher education, and also the published work of professional academics. The study of contrastive rhetoric is generally about one form or another of academic writing (Myers 1996).

5.2.1 Rhetorical styles

Although language proficiency is at the heart of writing, the "real problem with a poor piece of writing is not language-related errors but the fact that students have not met the expectations of the English-speaking academic reader. For some overseas students, the essays may be required to follow unfamiliar rhetorical styles" (Crowe & Peterson 1995). An added complexity is the different cultural conventions involved in academic argument (Jordan 1997:5). Overseas students may need to learn to read and write in new ways to meet new purposes inherent in the academic culture of higher education in the UK.

Schneider and Fujishima's case study of a Chinese postgraduate student in 1995 found that the student in question felt anxious when faced with the challenging tasks of writing an extended paper, or writing an essay in the exam. Without the resources to modify his approach to studying and writing academic discourse, he experienced only limited success in his graduate program (Schneider and Fujishima 1995:19). This is a problem that many Chinese students have met because they are not accustomed to assessed course work. Chinese students never encountered essay-writing of 3000-5000 words for an assignment which is very common in the UK. Nor will they have had any experience of using references or multiple sources of information (Turn 2000).

Jordan's (1981) survey on the writing difficulties of overseas postgraduates attending writing classes at Universities in the UK asked students to comment on their own writing problems (% indicating 'difficulties'):

vocabulary	62%
style	53%
spelling	42%
grammar	38%
punctuation	18%
handwriting	12%

A similar questionnaire was given to academic staff teaching the students:

style	92%
grammar	77%
vocabulary	70%
handwriting	31%
punctuation	23%
spelling	23%

The results clearly illustrate the mismatch between student and staff perceptions of the problems associated with written work. Students generally underestimate their problems, with large discrepancies for style and grammar. Indeed, most staff indicate style to be a major problem. Clearly this academic barrier will lead to an escalation of cultural shock for the overseas student, especially as it is not seen as a barrier by nearly fifty per cent of the students in the survey.

Izzo (2001) also found weaknesses in Japanese writing. "They have difficulty in presenting material in a logically organized and coherent manner that readers can

readily understand. Native English speaking writers are taught to present detailed information so that the readers will not have to make interpretations that could result in misunderstanding of the material being presented. However, Japanese writers tend to write around the topic and leave the readers with the task of interpreting the writers' message. Japanese writers are also inclined to include comments about circumstantially related information. This often results in a writing that includes a broad range of material, much of which is not directly related to the topic of the writing.

5.2.2 Organisation of ideas

Organisation of ideas within essays is often the greatest weakness of many overseas students, because different cultural backgrounds require different organisational patterns (Baack 2001:1). Most Eastern students hold the belief that "the main point cannot be appreciated without necessary background, so we give background first, then tutors will know what we know". The background leads up to the main point in a reader-writer collaborative scheme of communication where both are responsible for negotiated meanings. The response to this rhetoric from English tutors are often that the material is "irrelevant" or "illogical" because they maintain that the background comes from the main point and that a clear initial outline of an argument is expected instead of the background information at the beginning of an essay. English tutors see this style as "drifting, waffling", "beating around the bush", or "not getting to the point" (Cortazzi and Jin 1997:82). But from the Chinese point of view, the background paragraph is appropriate because Chinese philosophy is not to tell things too plainly, because

it is the reader's responsibility to dig out what the writer means. This also works in reverse. A Chinese student will think that the British pattern is a "give-away" since "there is no reason to listen or read once the main point is known". Each of these contrasting patterns is valid within its own cultural context, but either can be wrongly perceived. The main point may be missed by someone who expects it to be somewhere else. Both sides could be helped if they were aware of the readers' expectations.

Kaplan (1966) claimed that all written languages contain a variety of organisational modes and that native speakers recognise which modes to use and the consequences of their choices. However, the non-native speaker does not possess as complete an inventory of possible alternatives, does not recognise the sociolinguistic constraints on those alternatives, and does not recognise what constraints a choice imposes on the text which follows. The reason for this is that "the foreign student is employing a rhetoric and a sequence of thought which violate the expectations of the native reader" (Kaplan 1966: 4). Kaplan further insisted that "the foreign student who has mastered the syntax of English may still write a bad paragraph or a bad paper unless he also masters the logic of English" (Kaplan 1966: 15).

For EFL students, linguistic and cultural patterns transfer into their writing not only at the word and sentence level but also at the discourse level (Morgan 2001: 1-2), and since their previously successful strategies may not work with the new tasks assigned by the Western teachers, they need to modify old strategies and develop new ones. They may need to make changes in their learning strategies or

studying approaches in order to successfully perform the tasks of the new academic culture (Burrell, 2001:1). They need to adapt to a new academic system, within a different cultural environment, which has its own conventions (Jordan 1997:6).

Failure to adapt can have serious consequences. White (2001) explored the reasons why a student who has produced a text which, while grammatically acceptable, fails to fulfil the requirements of the writing task, and indicated that cultural expectancies will influence the perceived success or failure of the written communication. He asked a Polish student to write a letter and then asked seven British readers and Polish teachers to make comments on the letter. The results suggested that the evident mismatch of the writer's and readers' expectations could be attributed in part to cultural differences, and that if the reader of such a text is an examiner having the kind of expectations summarised in Tables 5.2 and 5.3, the writer who fails to meet these is likely to be disadvantaged.

Table 5.2 Expectations in the writer's culture

	Sincerity	Insincerity
Amount written	As much as possible	As little as possible
Reasons for failure	Highly detailed	Limited detail
Apology	Multiple	Single
Solution	Offer	Do not offer

Table 5.3 Expectations in the reader's culture

	Sincerity	Insincerity
Amount written	As much as necessary	Too much or too little
Reasons for failure	Limited but relevant detail	Multiple
Apology	Single	Multiple
Solution	Offer	Do not offer

5.2.3 Developing new ways of writing

It can be seen from the above that achieving success in a new culture does not lie solely in language learning, but in acquiring an ability to negotiate cultural barriers and develop new ways of learning and viewing the world, especially in understanding the host country's system of higher education and the student's place in it. Teachers need to be familiar with the socio-cultural sources of the problems encountered by non-native speakers when writing in English as a second language (Cai 1993). Most overseas students bring with them linguistic, cultural/attitudinal and academic experiences (Leki, 1992) and many of them already possess study skills to an advanced level in their own language. They may simply need help to transfer their skills into English and possibly to adjust them to a different academic environment (Jordan 1997:5).

Learners who come from communities which practise other sorts of discourse, or in which literate discourse served either no viable function or an entirely different

real purpose, are at a disadvantage – not because they are ignorant or stupid, but rather because they have not realised or accepted the registers and purposes of discourse in the academic community (Grabe and Kaplan 1998:423; Stern 1992:226).

An initial reaction to this failure to adjust to the new register may be the belief that an "Asian" learning style is a simple combination of memorisation and rote learning. However, there is a growing body of research to the contrary, which questions the assumption that Asians are a homogenous group with a single approach to language learning and recognises that Asian learning styles are much more complex than previously believed (Bilbow 1999:1). No matter how complex these may be, the failure to adapt to the new rhetorical styles will present the overseas student with academic writing problems. For example, Chinese EFL writers were found to lack the variety of lexical cohesive devices used by the native speakers and Johns (1984) found, based on close observation of writers, that reference and adversative conjuncts were the most problematic cohesive devices for the Chinese student. Unless students are made aware of such problems, and unless they can learn new strategies, there will be differing expectancies. These will work to the detriment of the student and an increase in the side effects of cultural shock: feelings of inadequacy and failure, and even physical and mental problems.

The explanation that "poor English" is the basic cause of such academic problems for overseas students is clearly inadequate, and additional English courses seldom resolve these problems. Masked by language problems lie the

much deeper problems of adjusting to a new intellectual culture, a new way of thinking and of processing knowledge to meet the expectations inherent in the English educational system. Overseas students come not merely from other language backgrounds but more importantly, from other cultural backgrounds and their past social and educational experience may not have prepared them either to recognise or to accept the need for change (Ballard 1996:154).

Writing skills are the skills most highly valued in Western universities and they are the skills least frequently developed in language classes. Here, too, the mismatch between the past experience of overseas students and the expectations of Western academic staff comes into sharpest focus. Most overseas students have relatively little experience of writing extended and systematic discourse even in their own languages, much less in English. Where essays are required, they tend to be literary works of art rather than arguments based on the critical analyses of selected evidence. So these students have very little experience of "thinking through writing", of using writing to develop and extend in their own independent and individual fashion of the ideas, findings and theories of others.

Benda (1999) indicates that EFL students who require help with their writing often have different kinds of problems than do native speakers of English. Aside from the obvious grammatical and spelling problems, EFL students might have difficulties with organization, support, and process, which can be very different from the kinds of problems of English native speakers. This suggests that any form of "corrective" experience for overseas students may have to be closely matched to the particularities of the student's home culture.

5.2.4 Developing "English style"

Orientation

People from different cultures are likely to have different views on such varied topics as time, physical contact, conventions of reading (right-to-left versus left-to-right, etc.), gender, culture, alphabets, and whether tones make a difference in the meaning of the words one says. In writing, the length of "orientation statements" is linked to English "style". Several studies have shown that English speakers typically produce much shorter orientation to the theme of a sentence or discussion than non-native English writers. Broad use of contrastive rhetoric as a classroom consciousness-raising tool can point to linguistic variety and rhetorical choices available to different students.

Evidence

The non-native English speaker is likely to have a different notion of what constitutes evidence, of the optimal order in which evidence ought to be presented, and of the number of evidentiary instances that need to be presented in order to induce conviction in the reader. These conventions are also important from the point of view of the reader because speakers of other languages: 1) may be logical in a different way; and 2) their logical orientation may make them appear illogical to readers anticipating a certain culturally-constrained demonstration of logic. In order to avoid writing that appears foreign and therefore alienates the native speaking reader non-native speakers should gain an

understanding of the conventions and "rules" that govern composing in English (Gibson 2002: 15).

Coherence

The notion of coherence is closely related to the notions of logicality and relevance, with an absence of either one seriously jeopardizing the coherence of a discourse. Sometimes only an apparent absence of either can create an impression of incoherence. In other words, essays may seem incoherent if there appears to be too little relation between one piece of information in a discourse and another.

The language in technical reports in various fields may seem incoherent to those unfamiliar with the subject matter, whether or not the discourse is really incoherent. Similarly, discourse that presupposes some familiarity with another culture may seem incoherent when listeners or readers lack sufficient knowledge of the culture. In other cases, audiences may not have problems with the content of the discourse but with the presentation of information. For audiences unfamiliar with certain patterns of organization, the information presented through those patterns may prove difficult or even impossible to understand (Odlin 1996:58).

Lack of familiarity with a discourse pattern is not the only possible source of comprehension difficulties. When readers are not familiar with another culture, they may not succeed in correctly interpreting the content of a discourse.

Culturally specific knowledge can affect not only the comprehension but also the production of discourse (Odlin 1996:61).

The purpose of writing an essay is to persuade an educated and critical reader that your point of view on a topic is correct. To achieve coherence, cohesive devices such as lexical choices, syntactic structures, adverbial expressions and reference devices (Ellis 1999:92) are supposed to be used between argument and evidence for the sake of optimal relevance, namely coherence. The central concern of this approach is the logical construction and arrangement of discourse forms. If it is too vague, lacks specifics, includes redundant information, or goes straight to the point, the disadvantage of not conforming to the required style is more than a difference in cultural tastes, since it may not only strike readers as lack of rhetorical elegance, but as lack of coherent writing or even coherent thinking, which can seriously affect the credibility of non-native writers. Clearly, students need to be made aware of the fact that styles which have served them well in the past may not be appropriate for their current requirements in the new culture. The barrier will only be removed if successful strategies of remediation can be implemented.

5.3 Removing cultural barriers

With the communicative theories of the 1980s (see Chapter 1.6) came the recognition that emerging technologies could support the development of learning environments which were culturally and experientially much richer, and could be used to overcome some aspects of the cultural shock experienced by

students travelling abroad. The media associated with these theories offered the first real steps toward opportunities for language learners to communicate and receive immediate and meaningful feedback. The 1990s saw the advent of high powered multimedia desktop computers providing access to virtual reality environments and the rapidly developing resources of the Internet. Developments associated with this phase have been described as: integrative web-based multimedia, and involve placing learners in close to authentic situations where learning simultaneously involves listening, seeing, reflecting, doing and participating. As Grabinger and Dunlap (1996) argued, the culmination of these technological developments is a sophisticated tool set which supports creation of rich environments for active learning. (Grabinger and Dunlap 1996).

Such systems rapidly expanded and a survey of information technology in American higher education in the late 1990s found that a third of all college courses were making use of e-mail, and a quarter of all classes drew on resources available on the Internet (Green 1997). In the UK, The National Committee of Inquiry into Higher Education (The Dearing Report, 1997) found that between £800 million and £1000 million was being spent annually in the UK on Communication and Information Technology. And, by 2001, China had moved into second place after the US in terms of internet users (Shanghai Reuters, 2002, April). The American Council on the Teaching of Foreign Languages showed its enthusiasm for the new technologies:

> Access to a variety of technologies ranging from computer-assisted instruction to interactive video, CD-ROM, the Internet,

> electronic mail, and the World Wide Web, will help students strengthen their linguistic skills. . .and learn about contemporary culture and everyday life in the target country (American Council on the Teaching of Foreign Languages, 1996: 31).

The impact of these technologies can be seen in the way communication between students in East Asia and North America is increasing in both quantity and quality as the access to synchronous CMC programs increases on both sides (Ma 1996:177). As Ma observed, information about the other culture that students formerly acquired only through mass media can now be obtained by talking directly to people in that culture. Kramsch (1999) remarked that authentic materials are more readily available as teachers are encouraged to use multimedia materials based on original videos filmed in culturally authentic contexts (e.g., for French, see Furstenberg, 2001, and Noblitt, 1997a ; for Spanish, see Noblitt, Rosser, & Martinez-Lage, 1997 b; for German, see Crocker & Fendt, in press; for Quechua, see Andersen & Daza, 1994; for Russian, see Paperno & Tsimberov, 1997). In general, the computer seems to offer immediate access to the way native speakers use their language in real everyday situations. As many researchers have shown (e.g., Crook, 1996; Herring, 1996; Kenning & Kenning, 1990; Murray, 1995), it offers the possibility of developing the sociocultural competence of language learners more readily than the pages of a textbook or the four walls of a classroom (Kramsch 1999:31).

As is evident, computer-mediated communication (CMC) and globally-linked hypertext, multimedia networking allow a powerful extension of the computer-as-tool, and facilitates access to people with different cultural backgrounds.

Meanwhile, multimedia networking with different kinds of information gives a comprehensive picture of the target culture from many angles. As a result, the combination of visual, audio and tactile materials effectively suits different learning needs and styles of EFL students.

5.3.1 Removing cultural barriers: CMC and web-based multimedia

From the standpoint of social constructivism (Vygosky, 1978), social interactions are crucial in the knowledge construction process and are highly valued for developing learners' thinking skills. Undeniably, computer mediated communication and web-based multimedia resources available make it possible to create a meaningful learning environment, where learning is fostered and supported (Khan, 1997). Encouragingly, in more recent years, web technologies are being used popularly at all levels of education (Mishra, 2002). Joo (1999) showed concern about cultural issues of the Internet in classrooms, in arguing that the internet opens classrooms to the world and the internet opens the world to classrooms:

> With the Internet, teachers are taken outside their classrooms. This openness of classrooms then introduces new roles and relationships between teachers and students, teachers and parents, teachers and administrators as well as among teachers and among students. Tools such as email and computer-conferencing offer a new arena for exchanging information and ideas. Moreover, teachers and students might expect to increase their intellectual effort and their social and cognitive engagement with online materials in a democratic and dynamic environment... While the

> internet allows anyone to penetrate classrooms, it also permits teachers and students to extend their horizon to the whole world (Joo 1999: 246-47).

One of the main purposes in implementing technology is to expand opportunities for the students to interact with the language and culture. Students learn language best when they take on very active roles in engaging in and shaping their own learning processes. This is a particularly critical issue at the advanced level where there is great variation in learner needs and abilities (Warschauer 2000:11). Appropriate use of new technologies allows for a more thorough integration of language, content, and culture than ever before and provides students with unprecedented opportunities for autonomous learning. Computer technologies not only help teachers and students to transcend linguistic, geographical, and time barriers but also to build bridges between native speakers and foreign language learners. The use of new technologies allows students to engage in the types of online communication and research which will be essential for success in their academic and professional pursuits.

With the help of the website devised for this experimental study and the on-line communication facilities available within it, the overseas students' experience in the UK will have, from the start, a unique opportunity to explore a world and to feel their way through a variety of social relationships that may bring radical changes in their attitudes to other people because some, if not all, of the cultural barriers will have been removed. "If the difficulties of adjustment that confront him are not too formidable of resolution, the students may well find their period

in Britain a time of the greatest intellectual and social enrichment" (Livingstone 1960:7).

Centering on language learning that has become more discourse oriented, interdisciplinary and culture-centred, the experimental website and E-course use multimedia technologies which give students access to a broad range of learning materials. Unlike textbooks and tapes, the culture bound resources offer more holistic learning experiences involving all four areas of language proficiency. In this intertwining practice of reading, writing, listening, speaking and research skills lies the great potential for helping students overcome both language and cultural problems (Greenscoro 1996).

We accept the position of Topousis (2001) that technology alone can't reform education, it serves as the catalyst for change because of the new opportunities it presents and the new demands it makes on teachers, administrators, and students (Topousis 2001). Multimedia integrate the educational process by transporting students from the linear mode of learning to the relational and the creative mode of inquiry. The experimental website and E-course provide this through their hyperlinks to authentic materials, but do not simply stop there because information dissemination systems also provide multimedia resources for information retrieval and browsing and these multimedia resources extend the richness of the learning environment. The website and E-course include links to a range of search engines that will empower learners in analysing and manipulating retrieved material and in constructing their own artefacts and mental schemas (Boyle 1997: 19).

One of the most enticing prospects that recent advances in interactive multimedia hold out to us is that of being able to customise the delivery of education and training to the needs of the learner. The possibility exists of providing learners with up-to-date learning opportunities that take into account their learning styles and which are matched to their rate of learning (Inglis, Ling & Joosten 1999:194). This just-in-time approach to learning works in two ways for web-based multi-media. First, the creation of and updating of websites may take less time than traditional media such as print; second, when the pedagogy driving the teaching methodology is based on constructivist interactivity, which makes extensive use of search engines as tools for learning, the material is never static because searches are always based on the current information available on the web. In this way multimedia technology can be used to support a variety of learning settings, varying from the simple provision of information by text, to the building of complex mental schemata by the constructive process of solving problems based on data searches or navigating and exploring hyperlinks suggested by the teacher. Education is complex and multimedia is a hybrid form. Yet it is often the "hybrid" adaptations that underpin the most effective learning environments (Boyle 1997:9).

5.3.2 Removing cultural barriers: interactive pedagogy

In the late of 1980s, communication scholars like Williams, Rice, and Rogers (1988) reached back to Wiener's cybernetic model of communication, which incorporated the concept of feedback loops in communication. This concept of communication was largely ignored in its day because it was not applicable to

mass media, which was characterised by one-way communication (such as radio and broadcast television). Feedback loops are especially suggestive to multimedia and communication feedback, which is highly relevant in a discussion of modern communication media because of the two-way (asynchronous and synchronous) capability of computer-mediated communications technologies. Williams, Rice, and Rogers defined interactivity as "the degree to which participants in a communication process have control over, and can exchange roles in their mutual discourse...(Williams, Rice and Rogers 1988:10). Likewise Tannenbaum (1988), define interactivity as the "process of engagement between two communicators in which each causes change and reactions in the other". This on-line communication experience can produce, when properly executed, a positive outcome resulting from the intellectual synergy that an individual experiences from sharing ideas and developing concepts in a non-linear way. It can expose learners to other cultures and enhance their learning experience by allowing them to benefit from the strengths of each other (Belanger 2000:23).

Suppose individual learners bring their analytical perspectives into the classroom and share their multiple perspectives in a group interactive session, the group environment can help facilitate the creation of new patterns of understanding built on the foundation of shared individual perspectives. These multiple perspectives facilitate the process of evaluation, as learners begin to assign relative value to the individual perspectives. As such, designers of multimedia courses are supposed to seriously consider whether there is a need for media that enable communication between learners, and in which way. In an evaluation of

23 cyber courses at a United States academic institution students highlighted the lack of student-student interaction as a major problem (Taylor and Burnkrant, 1998). Some of the findings indicate that a majority of students felt more isolated from others, worked less on assignments with others, and were less likely to ask and receive comments from other students on their own work (Belanger 2000:21). It appears that the provision of interactive elements such as synchronous chat does not automatically lead to students engaging in useful or meaningful interactions.

Regardless of the specific methodology used, language teachers have generally found it desirable to present new items through meaningful content. In Brinton's term, 'contextualizing' lesson presentations have become a widely accepted rule of good language teaching (Brinton 1989). Language learning takes place most effectively in social settings through communication. In this context, an important part of teaching is to structure opportunities for communication for the learner - the learner must communicate about something real and interesting. Through Computer Mediated Communication (CMC) a wide range of communication channels are possible (Cunningham 2000), but only the appropriate methodology will lead to the channels being used effectively.

The point is to build bridges between the classroom and the outside world by opening the classroom to the world and to facilitate students' entry into that cyberspace world. Moreover, students see the outside world through authentic language and by engaging in real transactions. With sufficient preparation, students can expose themselves to input, which is largely comprehensible

because they themselves initiate the transactions, and have some idea of what kinds of responses to expect. Students may also gain practical information, such as how to find their way around, where to purchase certain products or even how much it costs to send letters to their own countries. Students may gain a great deal of cultural knowledge and insight once initiated into the international cyberspace community -- whether through net surfing, emailing or webpage building -- they will be able to participate in it long after having finished their studies. As Huang (2002) remarked,

> Interactivity provides a way to motivate and stimulate learners. Moreover, it offers a way through activities and online discussion technology for instructors to cause learners to consider and reflect on the content and process of learning. No doubt, not all learners actively engage in interaction among individuals in a learning group. Instructors could assist them to identify and to build on active and passive participative group discussion. On the other hand, instructors can also ask learners to reflect and respond to learning contents every week through asynchronous communication tools such as listservs, newsgroups, threaded discussions or emails (Huang 2002:32).

In this interactive learning environment, each individuals benefit from the democratic and dynamic process. Gradually, the gap between school and real-life society will be bridged and social constructivist learning will arise accordingly.

CHAPTER SIX

APPLICATION OF THEORETICAL INSIGHTS IN THE DESIGN OF THE TWO EXPERIMENTS

This chapter describes the application of the learning theory of constructivism to a multimedia interactive environment. The aims of the study are: first, to introduce students to the target culture and to help them to construct new knowledge of that culture; second, to develop mechanisms for using multimedia to acquire English campus culture both in a practical and in an academic sense; third, to use multimedia as an active learning environment to support English academic writing.

Constructivism is applied to language and culture learning in a multimedia learning environment via the newly designed website and the E-course. Samples of the website unit and the E-course are presented (in Appendix II). Central to this study are comparison and communication. Comparison in this study refers to the comparison of the foreign culture with students' own culture and the comparison of the students' own past and present experience. As students became more aware of the ideas and practices in another culture, they had more recognition of how the ideas and ways of the other culture might be viewed from another point of view. As they learned more about another culture, they reflected more on their own culture. In this way, they would gradually become more competent communicators in multicultural settings. Students were also encouraged to compare and synthesise the new cultural inputs with their own past

and present experiences so as to construct new meaning. As "cultural understanding is an ongoing and dynamic process" (Robinson, 1985:12), students' cultural awareness needs to be honed accordingly.

Another key element of this study is communication: communication and culture, although two different concepts, are directly linked. Communication – the ability to share ideas and feelings – is the basis of all human contact and makes culture a continuous process because once cultural habits, principles, values, attitudes and the like are "formulated", they are communicated to each member of the culture. In this study, for example, active links were set up between Chinese students in China and English students in the UK through CMC. To be competent in communication, students need to learn the language through interaction with people in that culture. Meanwhile, students were also encouraged to communicate with their peers and their teachers. Since the content they were discussing concerned the knowledge, attitudes, and values of the target culture, they could frequently try to find evidence to prove their points from the web. As culture is socially constructed in interaction with others, students would learn more through meaningful interactions in the light of constructivism.

The starting point in this study was a contrastive examination of Chinese students' academic writing, including Chinese students' essays in Chinese, Chinese students' essays in English and Native English speakers' essays in English. In Chapter 3.2, the main principles behind the concept of contrastive rhetoric were explained. Five key points were highlighted in the experimental design:

1. The presence and the placement of thesis statement (to see if the essays were inductive or deductive);
2. The number and function of paragraphs (to see if they represented the *qi-cheng-zhuan-he* pattern or the introduction-body-conclusion pattern);
3. The presence of topic changes within a paragraph (to see if the reasoning was circular or linear);
4. The use of metaphors, proverbs (to see if the students wrote in metaphorical or straightforward style) and
5. The number of discourse markers (to see if coherence were explicitly signalled).

The findings of the five aspects of contrastive rhetoric were used to design an E-learning course which aimed to improve Chinese students' rhetorical skills in composing English essays. Hopefully, a close observation of rhetorical features could be useful for overseas students to enhance their English writing quality and for teachers to understand the difficulties encountered by overseas students in cross-cultural communication.

6.1 Application of constructivism to language and culture learning

The application of constructivism to EFL learning presents additional challenges and benefits to both the teacher, and the student (Brooks & Brooks, 1993). The challenge for the teacher is to provide relevant frameworks upon which the student can construct knowledge and understanding, and to act as a facilitator rather than knowledge-bearer during the learning process. Students must become

actively engaged in their learning experience, rather than act as passive recipients of information (Negroponte, 1995; Cunningham, 1992).

To meet both challenges and gain benefits for teacher and students, multimedia was used in this experiment instead of a traditional method in the classroom. Multimedia in this case was web-based in order to provide students with a system of accessing information and the means to create or re-create their own personal meaning from that information. They could then embed and extend their understanding in an interactive fashion as multimedia was used to create an interactive environment. This provided an opportunity for self-directed study that was both engaging and meaningful. Learning through this approach should be more tentative, flexible, experiential, project-based and holistic.

Basing the design on the characteristics of constructivism and the potential of multimedia, the overall structure of each unit of the website and E-course consisted of instructions, activities (some of which are interactive) and real-life tasks.

6.1.1 Instructions: information presentation in the website designed to encourage the learning of practical culture

The constructivist model of learning assumes that knowledge is not transferred but created (or recreated) by the learner (Belanger 2000:14). "By 'knowledge', we refer to the presentation of ideas, concepts, facts and materials about or from the foreign country and people in a structured way. Thus 'knowledge' is

'structured information', and more than the aggregate of facts contained within its structure" (Kramsch 1998:120).

This means that relevant frameworks should be provided with which students are familiar and within these frameworks, students should be encouraged to discover principles by themselves. The task of the teacher is to translate information to be learned into a format appropriate to the learner's current state of understanding. The curriculum should be organized in a spiral manner so that students continually build upon what they have already learned (Kearsley 2001).

Constructive instruction also suggests an approach to teaching "that givers learners the opportunity for concrete, contextually meaningful experience through which they can search for patterns, raise their own questions, and construct their own models, concepts, and strategies" (Fosnot 1996:ix).

In the website, the instructions are at the beginning of each unit because this was the format with which students were most familiar, but the instructions in this website were given in the form of multimedia so that students were able to select the information they needed, allowing them to try out different hypotheses and make decisions. There was no judgment as to which decision was right or wrong, instead students could compare and contrast and find the best solution.

If the purpose of learning is for students to construct their own meaning, then learning is not just memorizing the "right" answers but involves a search for meaning. Learning should start with the issues around which students are actively

trying to construct meaning, so that students are not only interested in the topics on the website and the E-course, but also know the significant issues and ideas around these topics. This leads to the development of a curriculum rich in meaning. This can be achieved with the three distinct yet interrelated principles:

1. The material is genuinely important and worth knowing.
2. A meaningful curriculum deals directly with values and beliefs about the content area.
3. Both content and methodology relate directly to the needs and interests of the student population.

In order to explore a foreign culture, students need information with which to construct their mental models and formulate hypotheses. Thus, when designing the website, the author determined what kinds of information the students would need in order to understand the foreign culture, and selected only those which were centred on the campus culture, because this was very relevant to the students. The same was true with the E-course. After having considered the genre, length, register, degree of difficulty and what students were most likely to write in the university courses, the author chose standard expository, 400-word length essays published by Cambridge University Press (permission was given to use the material for the purpose of this research) as model essays (see sample essays in Appendix I). One reason for choosing these materials is that these essays are of good quality, another is that the length, genre, complexity are similar to those students have to produce for their academic writing. In addition, because English

academic writing is part of their degree course, this practice contributes to the overall level of their degree.

Links to rich sources of internet-based materials were an essential part of the website and the E-course design, which provided learner-selectable materials. Some links were included in the instructions of each unit and other relevant information banks and repositories were linked directly to the course content. These included text documents, graphics, sound and video resources, that were deemed appropriate for helping students comprehend the cultural content. The WWW was viewed as the default storage medium, with powerful new plug-ins enabling users to access multimedia resources from the web. Being aware that simply pointing to web resources may not be an efficient way of guiding students to the solution to problems (Jonassen 1999:225), the author was careful in the arrangement of, and access to the resources.

Although constructivist approaches emphasize autonomy, discovery and the construction of knowledge, Piaget (1971) strongly advocated that this should happen within a structured environment. Price (1991) developed this by suggesting that the CAI author should include a sequence of nine instructional events that "teach" for each objective (Price 1991:84). These formed the basis for each of the units on the website for practical culture.

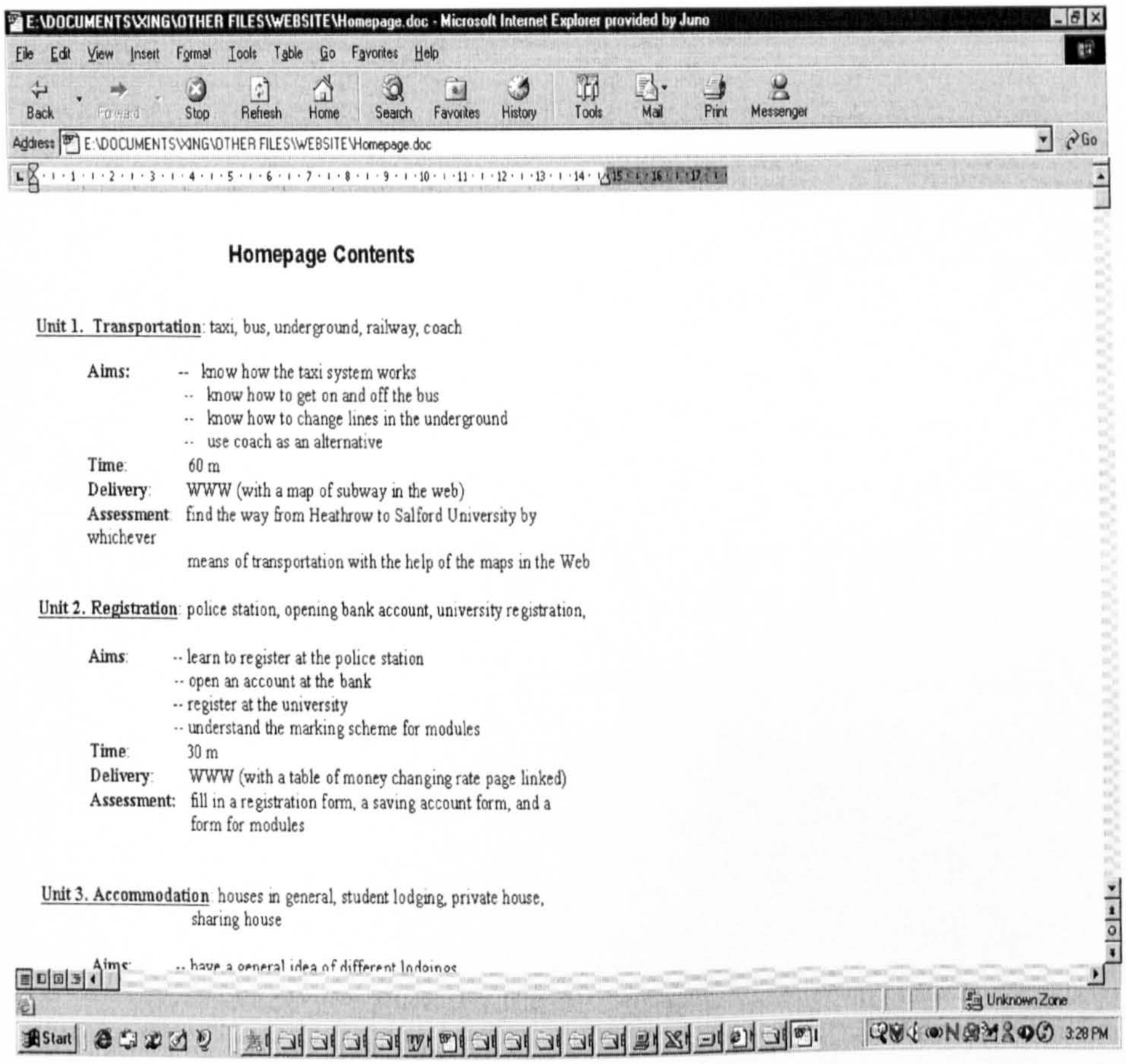
Table 6.1 Nine instructional events

	External instructional event	Internal learning process
1	Gaining attention	Alertness
2	Informing learner of lesson objective	Expectancy
3	Stimulating recall of prior learning	Retrieval to working memory
4	Presenting stimuli with distinctive features	Selective perception
5	Guiding learning	Semantic encoding
6	Eliciting performance	Retrieval and responding
7	Providing informative feedback	Reinforcement
8	Assessing performance	Cueing retrieval
9	Enhancing retention and learning transfer	Generalizing

(Source: Price 1991)

The author analysed the cultural barriers (see Chapter 5.1), and decided to give priority to 10 aspects of situations which students would probably meet when they were to come to a new culture. This was then constructed into ten teaching units. The purpose of doing this was to meet students' individual needs. The topics covered issues which would directly concern students from the day they arrive to the day they leave the university such as transport, accommodation, graduation, and in/after class activities. On the first page of the website, the ten units were listed in the homepage so that students would be aware of what was on the website, with the aims of each unit clearly displayed.

Figure 6.1 Homepage



(for details of the homepage, see Appendix II)

In each unit, the author asked students to compare the new content with that in their home country to build their new knowledge on their prior knowledge and stimulate recall of prior learning; and also to help them to be culturally aware of the similarities and differences between the two cultures. The next step, presenting stimuli with distinctive features included putting the instructions on the web pages ranging from simple to complex, all with step-by-step guidance. As part of this step, the author selected the web asynchronous form of web learning from among the possibilities listed below.

Table 6.2: Types of Web-based learning

Type	Description
Web/computer-Based Training	Individual learning that features drill and practice, simulations, reading, questioning, ar answering
Web/Electronic performance support systems (WEPSS)	Just-in-time training focused on problem-solving, scientific methods, experiential method, project method
Web/virtual asynchronous classroom (W/VAC)	Non-real-time group learning that employs experiential tasks, discussions, and team projects
Web/Virtual Synchronous Classroom (W/)VSC)	Real-time collaborative group learning that uses discussions, problem solving, and reflection

This was because students were doing different subjects and therefore might not be able to find a common time to make use of the website for synchronous communication. This approach emphasised one of the main advantages of web-based learning: flexibility in time and place for learning.

The author also decided to use multimedia to present the cultural knowledge in a non-linear way. In a book, words are linked together one after another in a linear fashion, however, with multimedia, text can be linked to explanatory text, to sound, to images, and to video. This power allowed learners to bring up multimedia links to enhance the learners' understanding of the target language and culture. Following the links should allow students to create their own meaning and organization. The website was an example of the use of hypertext to

provide a source of authentic and relevant text in the target language with the links contributing to guided learning. Then the author organized interactive activities on the website where students could communicate with their peers and with the teacher and eventually with native English speakers (this part will be further illustrated in the next section of activities). At the end of the course, students would be given feedback and be able to see their progress.

6.1.2 Activities: context for interactive communication

Well-organised activities have the potential to engage students' curiosity, causing them to question their prior understanding of a phenomenon. Knowledge does not consist of static reflections, but dynamic constructions achieved through acting and thinking. Only when individual learners are involved in active and constructive learning activities, which is the internal base, can social interaction add the external power and enhance their knowledge construction (Chen & Zhang 1999: 321).

Piaget (1970) also pointed out that we construct our knowledge of the world through interacting with the world. Knowledge is neither pre-given, nor stamped in by the impact of external stimuli. It is constructed and validated through interaction. Vygotsky's social constructivism also viewed social interaction as the primary source of material for the cognitive constructions that people build to make sense of the world (Boyle 1997:73). Four epistemological assumptions are at the heart of what is referred to as "constructivist learning":

- Knowledge is physically constructed by learners who are involved in active learning;
- Knowledge is symbolically constructed by learners who are making their own representations of action;
- Knowledge is socially constructed by learners who convey their meaning making to others;
- Knowledge is theoretically constructed by learners who try to explain things they don't completely understand (Gagnon & Collay 2002).

If Piaget, Vygotsky and constructivist epistemology are correct in emphasizing the importance of interaction, then "a central issue in interactive multimedia design is the nature and quality of the interaction" (Boyle 1997:20).

If students develop in social or group settings, the use of technology to connect rather than separate students from one another would be a very appropriate method. The teacher should create a context for learning in which students can become engaged in interesting activities that encourage and facilitate learning. The teacher needs to guide students as they approach problems, encourage them to work in groups to think about issues and questions. The teacher needs to support them with encouragement and advice as they tackle problems, adventures, and challenges that are rooted in real life situations, and that are both interesting to the students and satisfying in terms of the result of their work. "In an effective learning environment, an individual's tool-using and information-using activities need to be complemented by the powerful resources presented by other people and by the surrounding culture" (Wilson 1995:15).

Multimedia technologies including computer-mediated communication could meet the needs of interpersonal (both synchronous and asynchronous) communication. For example, in this experiment, after students have read the instructions of unit 3 in the website about student accommodation (details of the website will be given in the next section Chapter 7.2), they have a general idea about different houses or residence halls in the UK, which are different from those in China. Then they can start discussing with each other about what kind of accommodation they would like to have in the UK among the many choices available during their study abroad. They can approach the problem from the angle of safety, distance, price, relationship with housemates, socialization with other international students or the English landlord, language, age, etc. They can discuss with each other the advantages and disadvantages and find out their favorite combination of these factors.

By experiencing whole discourse in meaningful units, students learn to analyze the parts and construct new knowledge by reordering or synthesizing relationships between the parts. Language and culture learning is, therefore, an active process in which the student focuses on cues and meaning and makes intelligent guesses.

As culture is not just a set body of facts to be acquired by learners, but something actively created by learners through interactions that focus on meaning-making, such a view of culture requires a teaching model that uses cultural differences as a source of productive tension. The activities allow learners to recognise their

individual cultures and understand how those are embedded in the social cultures in which they and others live (Tseng 2002:20).

In the process of meaning-making, multimedia provides a context for interactive communication. Students can have a look at the website about accommodation first, compare that with the accommodation in their own culture, discuss with their peers and if they still have queries, they can ask their counterparts in the UK for an answer. Once they have formed the new concept of accommodation in the UK, they can consult the further links in the website and consolidate their new concepts and in this way, make their new concept precise and correct.

6.1.3 Real-life tasks: problem solving

According to constructivist learning theory, learning-by-doing is a key factor in content assimilation, retention and in student enjoyment (Brooks & Brooks, 1993). After completing all the activities described above, students should be able to apply the skills they had acquired to solve real-life problems, and to ensure that this happened, the learning environments were designed with learning tasks that were embedded in problem solving contexts and relevant in the real-life world. Learners must see the relevance of the knowledge and skill to their lives, and the leverage it provides in problems they see as important (Cunningham 1991). The tasks should be problem based or case based. These immerse the learner in a situation, which requires the learner to acquire the knowledge and skills relevant to solving the problem (Jonassen et al. 1993). To

design the learning environments, Cunningham et al (1993) proposed seven principles (Table 6.3):

Table 6.3: Seven principles for problem-solving design

1	Provide experience of the knowledge construction process
2	Provide experience in and appreciation of multiple perspectives
3	Embed learning in realistic and relevant contexts
4	Encourage ownership and voice in the learning process
5	Embed learning in social experience
6	Encourage the use of multiple modes of representation
7	Encourage self-awareness of the knowledge construction process

A resource for anchoring learning in an authentic context (Boyle 1997:72).

Following these principles, the author designed real-life tasks at the end of each unit. To complete these tasks, students needed to generate problems and the relevant sub-problems and solve them. Relevant sub-problems included finding out the distances involved in a specific journey and how to arrive at a specific destination, for example. The information required to solve these problems was embedded in what they had learnt. The students had to form their plan, search for the information and find the appropriate way to solve these problems. The website provided a resource for anchoring learning in a real-life context. The approach was based on actively engaging students in situations that involved collaboratively considering their own explanations for phenomena, resolutions to problems, or formulation of questions. Students were asked to actively construct their own knowledge by making meaning out of the situation by themselves with

support and guidance from the website. The website presented various situations and questions to groups of students who were trying to construct and to display their own explanations.

> "The insight why a result is right, understanding the logic in the way it was produced, gives the students a feeling of ability and competence that is far more empowering than any external reinforcement" (Williams 2000:50).

Learning through problem solving does not mean learning only by discovery. External guidance and support, which may be different from those in traditional teaching, are still very important in this circumstance. Therefore, as learners solve the problems, the teacher will keep monitoring their activity and offering various kinds of support and guidance to facilitate their problem solving activities and hence the construction of knowledge of the new relationships.

The design of the constructive learning environment focused on the learners' needs in the foregoing learning processes, and facilitated and supported their higher-order thinking and deep understanding. It was important to engage the learners in reflective problem solving of culture-related problems and enhance the interactions in the web-based micro-community to achieve the above goals. In particular, the website took learners' different needs into account to create a learning environment that was open and supportive for all the learners (Chen and Zhang 1999: 321).

6.2 Design of the website

An interactive, collaborative learning environment was created via the website to apply constructivist principles to multimedia interactive technologies in language and culture learning.

The following steps are required to interact with the website:

Step 1: students are to use 4~5 minutes go over the instructions (transport in this case) on their own. If they can understand what these transport systems are and how they work, they can move on to the activities part; if not, they can follow the links for more explanations of these transport systems on the website.

Step 2: students will then compare the transport systems in the UK with those in China and tell the differences and advantages and disadvantages of each. They are asked to use the search engines, try different key words to search and see which words or combination of words work better.

Step 3: they will compare their search results and find out the most efficient way of using the search engines and the most efficient way of using the English transport system.

Step 4: students will be given real-life tasks to complete using the transport system.

The sample presented below is designed to take a practical look at teaching through the constructivist website by breaking down constructivism and identifying the strategies used to help our students construct their own knowledge. Constructivist teaching was divided into six parts: pre-assessment, challenging misconceptions, introducing new concepts, making connections, reflection, and post-assessment. Each part is described and then examples of the strategies used in each of these parts are given. Many of these strategies are used in more than one of the parts. The strategies can also be combined or customized for a particular situation.

Table 6.4: Course features

1. Pre-Assessmen	2. Challenging Misconceptions	3. Clarifying New Concepts
4. Reflection	5. Making Connections	6. Post-Assessment

(Source: CETP 1999)

Table 6.5: Website activities

Unit One Transportation		
Instructions	Activities	Real-life tasks
Taxi Bus Subway Railway Coach Bike	From Heathrow, London to Salford by train (choose fron options) Compare the underground system in London with that i Beijing, explain the differences (on-line discuss	Find the cheapest way from Victoria, London to Leeds University How do you get to Oxford Circus from Euston by underground? How many times do you have to change

	with group) Go to a search engine, type i key words, find out the quickest way to use the taxi.	and what are they? You want to catch a flight at Manchester Airport, but you cannot stop a taxi in front of Salford University, what would you do?

(for details of the website, see Appendix II)

Pre-Assessment

Constructivist teaching takes place in a student-centred environment in which the past experience of the student is respected, and student experiences and student knowledge guide instruction. Student learning is often sequential and linked to previous experience. In constructivist learning, a teacher builds on what students already know, so assessing current understanding is central to the teaching process. Pre-assessment activities are the starting place for instruction. They prime students' minds. Pre-assessment activities are typically used at the beginning of a semester, but can be done throughout a series of lessons every time a new idea, a new topic, or a new situation arises. These activities help students begin the process of reflection.

Students' ideas and opinions reveal much about their current conceptions and reasoning. It would be impossible to customize instruction without detailed knowledge of what students are thinking. Lacking this knowledge, the teacher may address problems that the students do not have while ignoring crucial misconceptions that must be addressed before students can understand what is

being taught. The end result may be a total lack of student learning despite much work and effort on the part of both teacher and students (details of how pre-assessment is carried out will be given in Chapter 7).

Challenging Misconceptions

Students came to class with a lot of knowledge and many ideas about how the world worked. They had been successful in using these ideas to help them make decisions. Some of their ideas did not hold true in all situations, especially in a foreign cultural context, and were therefore considered misconceptions. As a teacher of a foreign language, the author was charged with challenging these misconceptions and guiding students toward the concepts that were current in the target culture. Because students had been using this knowledge and ideas all the time in their home country, it was very difficult for them to give up their concepts and ideas and adopt new ones.

With the constructivist approach, instead of treating students as empty vessels into which teachers poured their knowledge, more respect was shown to students as learners and as human beings. It was very important for the teacher to be aware of initial student misunderstandings in order to provide the kinds of experiences that will address erroneous concepts. Teachers must get to know what students were thinking and understand the thinking, reasoning, and assumptions and allowing opportunities for students to express their points of view and to elaborate on their explanations. The course needed to give students a variety of ways to test their own concepts and help them connect these new ideas

to their experience in a foreign culture. It needed to give them ample opportunities to discuss and reflect on each test and how the results fitted in with what they thought. The course needed to constantly challenge what the students were thinking, right or wrong, to ensure that their ideas were built on an accurate foundation.

Take Unit One for example, those students who had never been to the UK and had no idea or a vague idea of the transport system simply assumed that the system operated the same way as that in China. They thought that they could stop a taxi any time on the street simply by stretching out their arms, which is not the case in most cities of the UK. To put the misconception right, students could first go to the website Unit One for the instruction on this topic (see table 6.5 above and Appendix II). After that they could go to the links to see exactly what they looked like and see how the transport systems were running. Then they were guided to make a comparison of the transport system in the UK with those operating in their home country. They had to think about, for example in the UK, how to order a taxi; how to let the driver know that you are going to get off at next stop when you are in the bus; whether the underground takes you to your destination, and if so, how you can find out.

During the process, they were encouraged to use the search engine YAHOO, or GOOGLE etc. to search for the information by typing the key word or words. For example, if they wanted to know how to use the taxi in the UK, they might type in "taxi", in the search engine of YAHOO, then less skilful students would find more than 3,880,000 results and it would take a long time to check one by one.

However, more skilful students would discover that on top of the results, there were categories such as "transportation taxi", "TV comedies taxi" or "taxi stories". If they follow the transportation taxi, they would find "Dublin taxi" "London taxi" or "taxicab". Some other students might go straightaway to "London taxi", because London is the capital of the UK, taxi in London might, to a certain extent, represent the taxi systems in the UK. Some students might use the search engine of YAHOO, some might use GOOGLE, and they could always try different search engines from a variety of choices recommended in the website.

With various ways of exploration, students would then be organised to have a discussion with each other and exchange their exploration findings by using different key words and different search engines. They could each recommend which they thought was the most efficient and give the reasons. Their ideas could be questioned by other students or by the teacher. They had to either defend themselves by convincing others or accept better ideas and in this way students and teachers were learning from each other. These discussions happened during the breaks when they met for the English courses for the first two weeks. One reason is that the teacher could get involved and give some guidance if necessary; the other reason is that at the beginning of the semester, students' access to the Internet and e-mail was not completely ready yet. From the third week on, these discussions happened online. Whenever a student got a new discovery, a short-cut or a good combination of key words, he/she would e-mail another student on a one-to-one base or send the messages to the whole group. Because the

computer automatically records the time, it is easy to discover who was working faster and better.

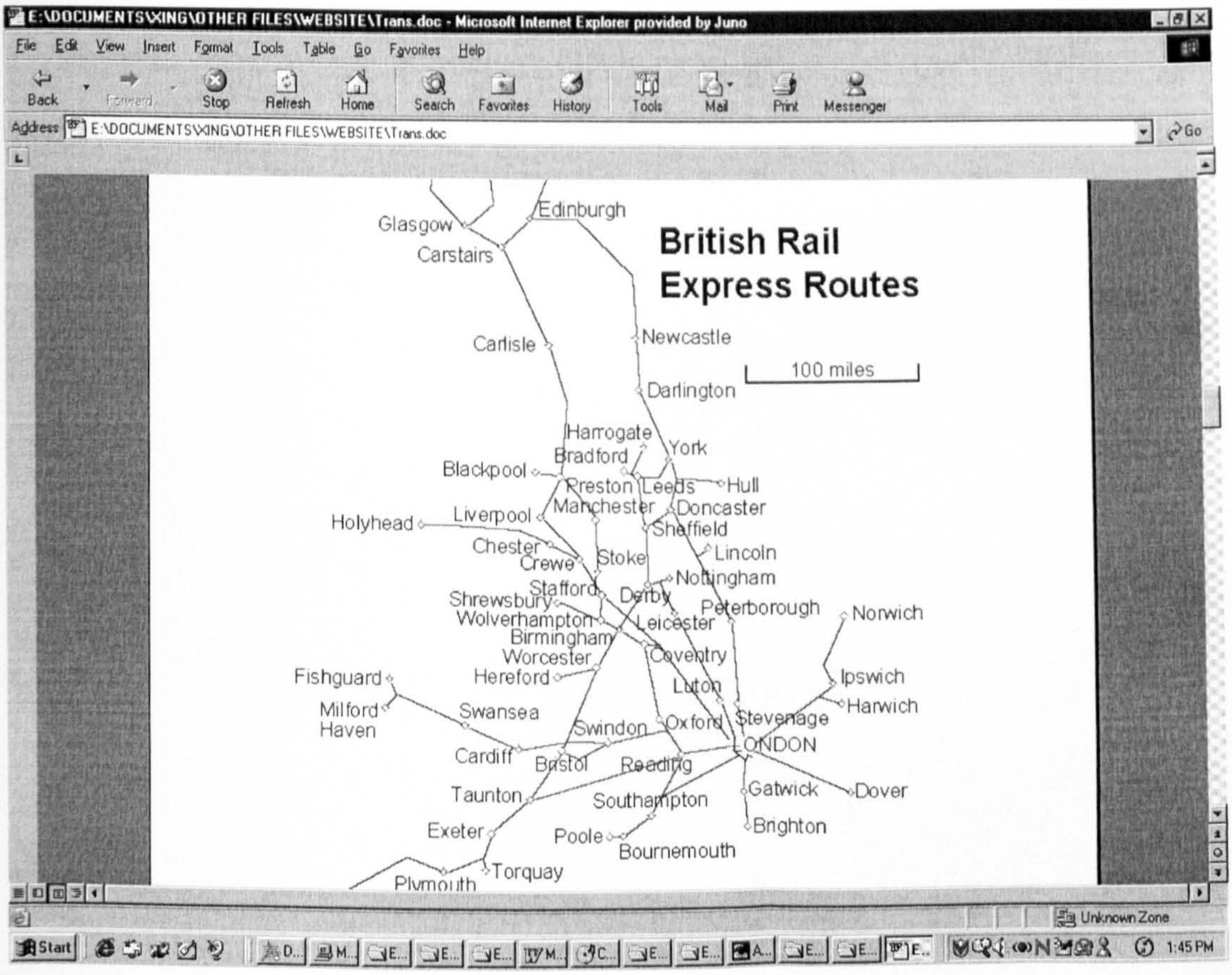
Clarifying New Concepts

Students need to meet new concepts. Language students, in particular, need to know the new concepts in a foreign culture. The website in this experiment provided an orderly set of activities through which students could gain experience of the new concepts. One goal of these experiences was to provide concrete examples of the target culture. The other was to help students find ways to connect these new experiences to old experiences, and to connect the concrete examples to the more abstract situations. Only after these new experiences could the students be ready to understand the language and the new culture. The experiences were the references to which the language could be connected.

For example, Unit One in this website provided students with a variety of experiences on a topic of transport. As part of the discussion, they would compare their own experiences of searching the web and provide other students with new discoveries of key words or combination of key words. As students were explaining how the search engine worked and what they had in common, they could refer to the new concepts such as ringing the company for a taxi; ringing the bell in a bus; distinguishing the coloured lines for underground etc. Because the students were involved in the activities of using the transport system in the UK, they were excited about the new meanings or concepts about the transport system of the target culture.

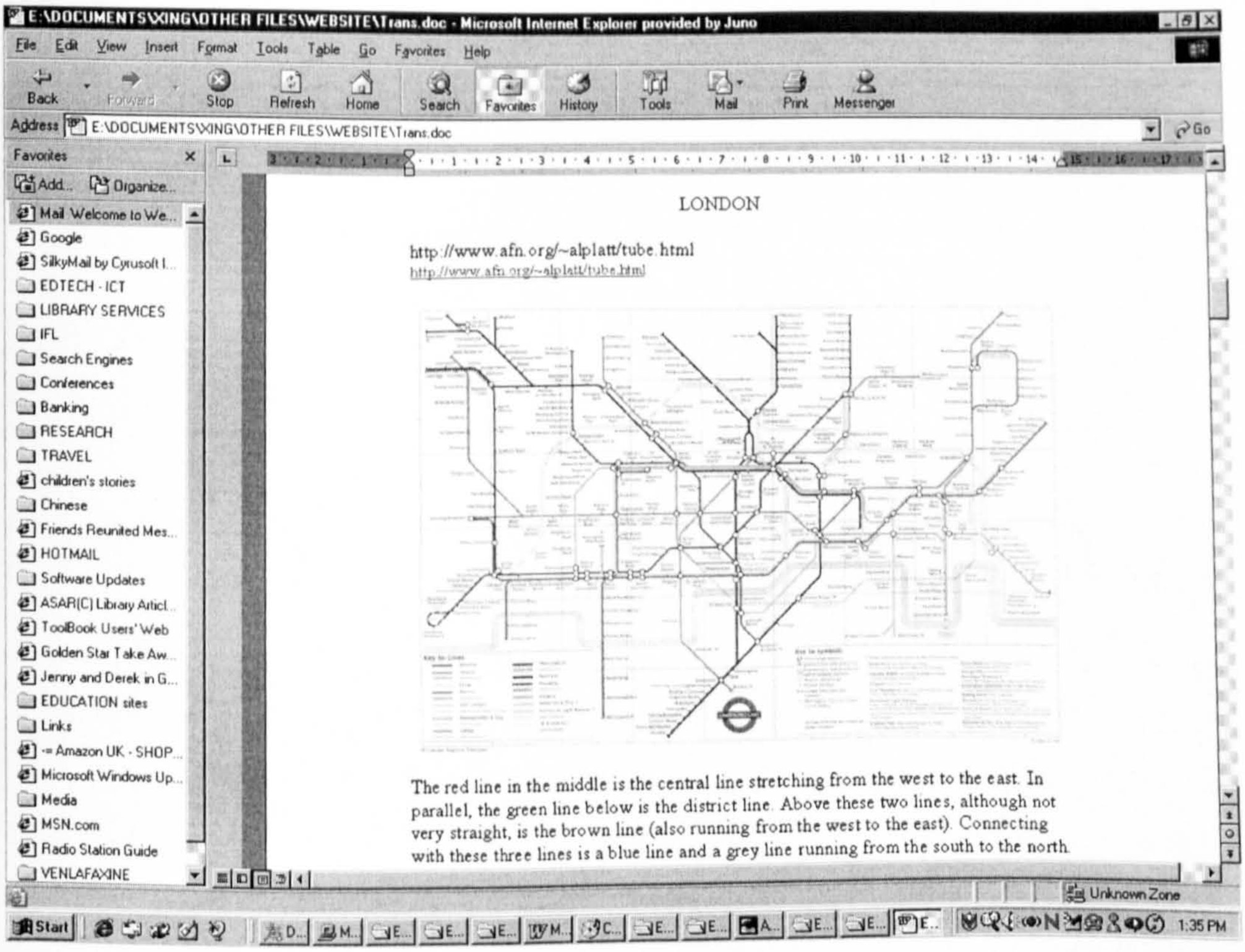
The students were then given a real-life task and they had to find the solutions on their own. For example, the students were given the name of a place as a starting point and a destination to get to and they were asked to go by railway according to the map shown in Figure 6.2.

Figure 6.2: Unit 1 Transport – British Rail Routes



After the students had found their own answers and shared their solutions with their peers, the teacher could summarise the most efficient way to complete the task and clarify the concept of transportation.

Figure 6.3: Unit 1 Transport – London Underground



The use of multimedia on the website could help the students understand a concept. With the help of colour and charts in the map, students got to know that blue is the Piccadilly line; green is the district line and red is for the central line, brown for the northern line. With these new concepts, students could apply them to real-life situations. They could compare and contrast various alternative ways to get to the destination using the underground. The website presented the students with an investigation in which the students could change one of the variables in the situation, record the results, and draw conclusions.

Reflection

Reflection is a very important part of constructivist teaching and learning. Students were asked to reflect upon what they had learnt as they applied their knowledge to real world situations. As they applied their knowledge and skills, they could explain why they were doing what they were doing. For example, after studying the British transportation system, students could think over which keyword led to the shortcut; which combination of keywords worked faster; which students did well and how they managed that; which colour in the underground map referred to which line. Having figured that out, they were more efficient in using the search engines and applying the skill of searching for information to other circumstances such as giving advice to other people who planned to go to the UK for a short visit or for a conference.

The website activities guided students through experiences, helping them refine their thinking, and provided them with opportunities to construct meaning out of their experiences. The activities in the website also provided opportunities for dialogues among themselves, with the tutors and with the NSs so students could connect their new experiences and ideas to their existing ones.

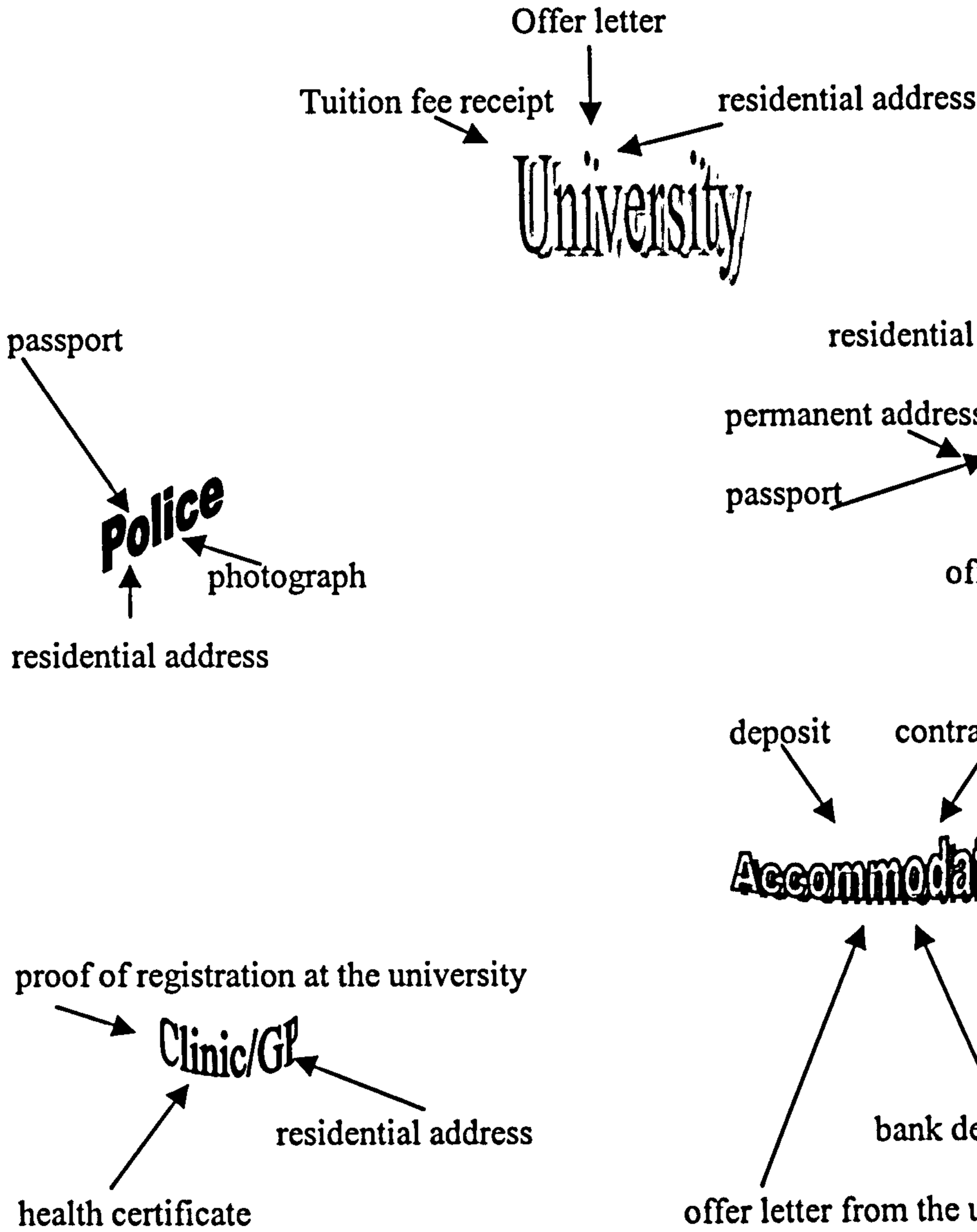
Generally, meaning can be constructed in two ways: through new experiences, or through contemplation and recalled experiences. The latter technique is given short shrift in our current educational system, and yet it is through this reflective process, which formed a core element in the website that we come to know concepts deeply.

Making Connections

Making connections helped students to construct their own knowledge. They could make connections between ideas and concepts. They could make connections between website activities and real-world applications and they could make connections between concrete and abstract examples of a given skill or concept.

The strategy to do this was to keep similar observations in several categories and make connections. For example, Unit Two in this website dealt with registration. After students had learned how to register with the police station, they could also learn how to register with a bank etc. Afterwards, they could learn how to register with a dentist, an optician etc. Near the completion of a unit, students were required to create a list of the ideas, terms, and concepts that had been learned. Students were to work online to make connections between the words and phrases and to organize the words and phrases into groups.

Figure 6.4: Examples of connections between concepts



As the figure above illustrates, the activities encouraged students to do mindmapping: they learned to connect more concepts around a given topic. For example, when they were doing university registration, what came into their mind was not only the university, but also all these documents needed for the university registration such as the offer letter from the university; the tuition fee

receipt and the residential address. Lack of one of these would lead to delay or failure of the registration. Along the same lines, if they were to register with a police station, they would show their passport, photograph, and residential address.

After making these connections, students were more familiar with the new concepts covered in this unit and were then presented with different problems that were drawn from real-life situations as they studied the topic such as registering with a bank, with the university clinic and register their accommodation.

Feedback

The post-test was used to find out what knowledge students had learned and what skills they had acquired so the process of knowledge construction could continue and the skills acquired here could extend to their autonomous and life-long learning. As in all teaching, there is a continuous circle of assessment and learning. In constructivist teaching, post-assessment makes a special effort to address the higher- order thinking skills and therefore looks for ways for students to show what they know in context. In this experiment, the post-test was used not only to detect what new knowledge students had obtained, but also through which channels they obtained it: multimedia, information provided in the website or else (for details of the feedback, see Chapter 7.2).

6.3 Design of the E-course

The E-course, as the name suggests is mainly electronic. It was an electronic course for English academic writing, focusing on the contrastive rhetoric features discussed in Chapter 3.2. The difference between the E-course and the traditional class is that in the E-course, students could send the first draft of their essays to the web and compare them with the contrastive features which were also displayed on the web. The teacher could send the feedback to the web-based course so that everybody could have a look at the comments and students could send their comments through online discussion. They could then compare their own essays with those done by native speakers or in published books (see Chapter 6), and then discuss with native speakers, revise their drafts and turn them into the final version. This was done electronically (the whole procedure is displayed in Figure 6.5 below). The E-course was supplementary to their normal English writing class, running every other week:

Week 1-2. Theme/thesis statement

Week 3-4. Structure

Week 5-6. Topic-support sentences with example (for); focused paragraphs

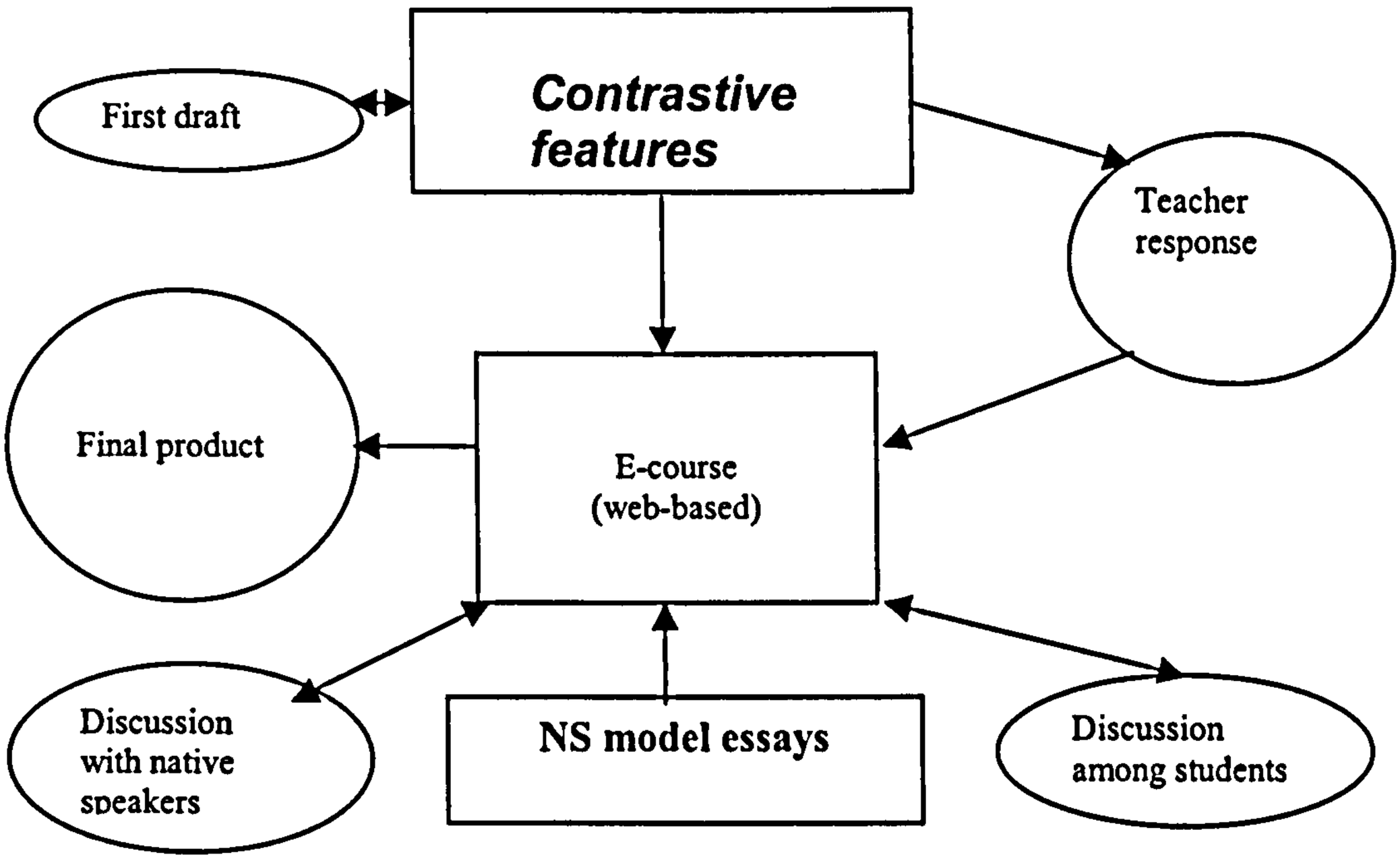
Week 7-8. Topic-support sentences with example (against); focused paragraphs

Week 9-10. Discourse markers

As with the website, a constructivist approach was used as the guide for the design of the E-course in this study. Comparison and communication were the principles that ran through the E-course. Chinese students' sample essays,

English teachers' sample essays and the model essays from IELTS textbooks (published by Cambridge University Press) were the main content of the E-course and students were asked to compare and discuss the differences. The analysis of contrastive rhetoric features results was displayed in the E-course. By learning the lessons from this analysis, students could construct their knowledge of academic writing first by themselves and then with the help of the E-course. Again, only the experimental group had access to the E-course and online communication.

Figure 6.5: The writing process



The structure of the E-course was parallel to that of the website: instructions, activities and real-life tasks (see Table 6.6).

Table 6.6: E-course activities and tasks

Unit One Thesis Statement		
Instructions	Activities	Real-life tasks
Main idea of the essay to be brought out as early as appropriate First paragraph introduces the topic and argument First paragraph also gives some idea of the examples or facts to be used First paragraph clearly shows the issue the essay would discu	Read a model essay Read the essay again, with the thesis statement taken out Write your own thesis statement for this essay and put it in the right place Compare your thesis statement with those of your classmates' Compare your thesis statement with those of NS Check with the original model essay	Write an essay with 400 words on the topic of *What do you think are the advantages and disadvantages of Higher Education?*
For more information, go to hyperlinks on thesis statement: http://www.gc.maricopa.edu/English/essay/ http://jklivingston.home.mindspring.com/essay/basicessay.pdf http://owl.english.purdue.edu/handouts/general/gl_thesis.html http://www.unc.edu/depts/wcweb/handouts/thesis.html http://www.uiuc.edu/providers/oisa/OISAService/Publications/Academic/academic.ch4.html		

The first unit was designed to practise the thesis statement. The objectives of initial instructions were:

- To supply the necessary materials for the students to build up their schemata in order to write good essays

- To give the students some theoretical knowledge about writing from which they would benefit later on
- To limit the features provided through the input to what is relevant to their needs, rather than presenting everything
- To facilitate their lexical and syntactic development by providing typical and good samples as models.

The instruction part provided information and demonstration, which would lead students to explore, that is, to move through information or obtain demonstrations upon request. Through the discovery or guided discovery that accompanies an exploration, the students could learn concepts, procedures and strategies as they interacted with the E-course, which would happen in the next stage, the activity part.

In the activities part, the E-course and its links were used as an educational resource – the natural impulse was to inquire or to find out what is needed; to use the language and thereby to enter into the social world. The E-course linked to an abundance of materials. Bringing all these materials together made it possible for students to compare the English and the Chinese way of writing a thesis statement. This helped to expand the range of their learning experiences, opening up the social and natural worlds. Students could explore the relations among these comparisons and thus experience a more connected form of learning. More importantly, these new media were interactive. Students could choose what to read and do and learn to write thesis statement in a new and correct way and thus extend what they learnt. This should give rise to active, engaged learning. The

effects of larger resources were to a large extent the ways through which they altered the environments for thinking, communicating and acting in the world.

In the real-life task part, students were given the essay topics that were used in the Western university classes for academic writing practice and were asked to write their essays independently first on the computer. After consulting the contrastive features, they could revise their first draft and submit it to the teacher. The teacher had a look at both form and content, made some corrections if necessary and sent it back to the students via e-mail either to the student individually or if permission was given by the student, sent it to the list so that everybody could read each other's work and made suggestions. Then, they could consult the model essay to see the differences and modify their essays. They could then ask their NS counterparts to make comments online armed with all this information, they could revise their draft again and complete their essays.

To ensure that the three parts of instructions, activities and real-life tasks work well, the E-course for academic writing also went through the same six stages: pre-assessment, challenging misconceptions, clarifying new concepts, reflection, making connections and post-assessment.

Pre-assessment

As constructivism suggests that new knowledge would be based on existing knowledge, the first step for the E-course should be to explore and to have a clear picture of what the learners already knew about English academic writing and

where their weaknesses were. This was done through pre-assessment, namely, their first essay (for details, see Chapter 7.4).

Challenging Misconceptions

Chinese students were brought up in a Chinese culture, where *qi-cheng-zhuan-he* was regarded as the appropriate structure for an essay (see Chapter 4). Students had been using this structure in their Chinese essay writings all their educated lives and it was understandable that they automatically applied it to their English essay writing. No wonder some western university teachers complained that "you have to wait until the end to see what it is about" (see Chapter 4.2). To challenge this misconception and form the habit of making their thesis statement as explicit as possible, the practice of the E-course centered around the five aspects (thesis statement, structure, topic supported sentences, topic supported sentences and discourse markers). For example, to practise topic sentence, the following exercise is designed:

Present a written argument or case to an educated reader with no specialist knowledge of the following topic.

Fatherhood ought to be emphasized as much as motherhood. The idea that women are solely responsible for deciding whether or not to have babies leads on to the idea that they are also responsible for bringing the children up.

Introducing topic and argument
Qualifying the statement

In some societies, it has been made easier over the years for single parents to raise children on their own. However, this does not mean that the traditional family with both parents providing emotional support and role-models for their children, is not the most satisfactory way of bringing up children.

Of crucial importance, in my opinion, is how we define 'responsible for bringing the children up'. At its simplest, it could mean giving the financial support necessary to provide a home, food and clothes and making sure the child is safe and receives an adequate education. This would be the basic definition.

There is, however, another possible way of defining that part of the quotation. That would say it is not just the father's responsibility to provide the basics for his children, while his wife involves herself in the everyday activity of bringing them up. Rather, he should share those daily duties, spend as much time as his job allows with his children, play with them, read to them, help directly with their education, participate very fully in their lives and encourage them to share his.

It is this second, fuller, concept of 'fatherhood' that I am in favour of, although I also realise how difficult it is to achieve sometimes. The economic and employment situation in many countries means that jobs are getting more, not less, stressful, requiring long hours and perhaps long journeys to work as well. Therefore it may remain for many a desirable ideal rather than an achievable reality.

I believe that child-rearing should be the responsibility of both parents and that, whilst the roles within that partnership may be different, they are nevertheless equal in importance.

The original paragraph was hidden initially and could only be displayed on the screen on request. Students had to use their brains first, and then consult other students before they could see the model paragraph. The course materials were put in the E-course week by week, thus students could only see the model after the previous procedures (instructions and activities). The use of other rhetorical features are practised following a similar procedure. To reinforce the skills in academic writing, students needed to practise on a large number of NS model essays; they needed feedback/results of contrastive rhetoric features; they needed comments and suggestions from their peers so as to understand how to make their argument convincing. They could compare their own previous work and their present work, compare their own work with those of their peers and their work with the NS to discover the rules or patterns by themselves (see figure 6.5).

Clarifying New Concepts

Through the comparison mentioned above and the input from the instruction, students became more familiar with the new concepts. They became aware that the thesis statement should be made explicit; one paragraph should centre around one main idea; and sufficient discourse markers should be given to the readers as a sign of where the essay was going. For example, to practise discourse markers, some discourse markers were taken out from the sample essay and students were asked to fill in the discourse markers. The drag and drop technique was used. If students chose the discourse marker and dragged it on-screen in the wrong place, it would not drop into place – this would only happen when the student found a suitable position for the discourse marker. This practice was to raise their

awareness of the discourse markers. The following is an example of practice on discourse markers.

Present a written argument or case to an educated reader with no specialist knowledge of the following topic.

Prevention is better than cure

Out of a country's health budget, a large proportion should be diverted from treatments to spending on health education and preventative measures. To what extent do you agree or disagree with this statement?

_____ it goes without saying that prevention is better than cure. That is why, in recent years, there has been a growing body of opinion in favour of putting more resources into health education and preventive measures. The argument is that ignorance of, for example, basic hygiene or the dangers of an unhealthy diet or lifestyle needs to be combated by special nationwide publicity campaigns, _____ longer-term health education.

_____ , there is a strong human argument for catching any medical condition as early as possible. There is _____ an economic argument for doing so. Statistics demonstrate the cost-effectiveness of treating a condition in the early states, _____ delaying until more expensive and prolonged treatment is necessary. _____ there are social or economic costs, perhaps in terms of loss of earnings for the family concerned or unemployed benefit paid by the state.

So far so good, _____ the difficulties start when we try to define what the 'proportion' of the budget should be, _____ if the funds will be 'diverted from treatment'. Decisions on exactly how much of the total health budget should be spent in this way are not a matter for the non-specialist, but should be mage on the basis of an accepted health service model.

This is the point at which real problems occur - the formulation of the model. How do we accurately measure which health education campaigns are effective in both medical and financial terms? How do we agree about the medical efficacy of various screening programmes, _____ , when the medical establishment

so that
for example
but
particularly
Then
rather than
Of course
also
Obviously
as well as

itself does not agree? A very rigorous process of evaluation is called for, _____ we can make informed decisions.

While doing these exercises, the concept of discourse markers would start to assimilate in students' English writing. As students were becoming more and more familiar with this new concept, they would automatically put the discourse markers in the right place to help present ideas in a coherent way. In this way, they could absorb the new concept of discourse markers into the new cultural demands in academic writing.

Reflection

After these activities, students were encouraged to reflect on their improvements by comparing their new essays with their previous drafts and comparing what they had written with what their peers had written on the same topic and those of NSs and by communicating with the native speakers through the asynchronous e-mail discussion. They could reflect on their progress and see what factors had led to these changes in their writing style (the writing process will be given in Chapter 7).

In addition to seeing how they use the structure themselves, students obviously need to be aware of the features to be found in NS texts and the conventions and expectations which might exist in their own academic writing. This kind of consciousness-raising was assisted by the reflection on NS sample essays and the

source of data were either written by NS university teachers in the UK or published in the IELTS by Cambridge University Press.

Rhetorical consciousness-raising in this E-course also involved a focus on texts by asking students to conduct mini-analyses of contrastive rhetoric features on their own. This did not have to be an elaborate exercise, as a simple task could encourage students to examine texts. For example, reflections were done by

- looking at a sample essay from the E-course and marking all the connectors
- explaining any differences that occur
- selecting the topic sentences in each paragraph
- inserting a thesis statement where appropriate

Sorting, counting and recognising the contrastive rhetoric features allowed students to see how these contrastive features were used in context. To direct their attention to features of contrastive rhetoric provided broad boundaries to the options available to writers. Such a comparative approach, with a strong focus on rhetorical consciousness-raising revealed to students that a writer's decision whether or not to use that structure could be a central way of establishing a relationship with readers and constructing what would be seen as an effective argument.

These kinds of tasks helped students to see that there was no single concept of academic literacy but a variety of practices relevant to and appropriate for particular disciplines and purposes. It was important for students to be aware of

this variation, not only because it would make them better writers, but also because it would help them see that learning to write at university was not a process of "fixing up" language weaknesses, but of coming to use discipline specific conventions appropriately.

Making Connections

Making connections in this context means setting up links between Chinese students in China learning English and European students in the UK learning Chinese. The desire to know another culture from both sides drove their communication by constructing a mental representation through the sharing of basic information and common interests. The availability of modern information technology provided students with possibilities for online communication, which enhanced students' thinking skills as they responded to specific messages directed to them and as they made decisions with regard to the communication. In the process of revising their essays, they would consider the comments and suggestions by their own peers and their counterpart native speakers (examples will be given in Chapter 8). In this way, they learned to work collaboratively and, in so doing, improved their cross-cultural communication skills.

Students were actively engaged in the writing task through the dynamic and interactive mode of communication. The interactive communication could further allow them to participate actively in an experiential or 'living' curriculum, which extended beyond their textbooks, and involved them in situations with real-life audiences as global peers.

The interactive communication between Chinese students and English native speakers offered a comparative approach that required students to observe, compare and analyse parallel materials from their respective cultures. These initial observations served as a starting point for attempting to decipher the meaning behind the differences revealed. They could exchange viewpoints in a reciprocal way and gain an ever-deepening understanding of the other culture and study and research an increasing array of materials to expand their cross-cultural analysis. Students, first on their own, made preliminary observations about the similarities and differences about the contrastive features, analysed them, and started forming similar structures. Students then had online discussion with their peers and later with native English speakers in which they (a) shared their observations and hypotheses; (b) sent queries for more details, clarification, and more in-depth understanding of the differences they observed; and (c) responded to whatever question that was posed to them. With all these resources and revisions, students gained competence in English academic writing.

Feedback

Their last essays were used to find out if students had made improvements in their academic writing. This could be done by looking at their first essay scores and last essay scores. If their last essays scores were higher than their first essay, the next thing to examine was to see whether the improvements were the results of the E-course. This could be done by looking at the five aspects discussed in (Chapter 3.2.4--3.2.8): 1). where they put their thesis statement in their first essay and where in their last essay; 2). how many paragraphs they used in their first

essay and how many in their last essay; 3). whether there were topic changes and how many topic changes in their first essay and how many in their last essay; 4). how many metaphors/proverbs they used in their first essay and how many in their last essay; 5). how many discourse markers they used in their first essay and how many in their last essay and finally whether these aspects would influence the overall quality of their essays. The last essays would also come from the experimental group and the control group.

In this chapter, the conceptual framework for this study was presented. The process of making connections between existing and new knowledge was discussed. Multimedia reality, both in terms of website and E-course, was then presented as a constructivist learning tool to assist students in making deep, meaningful knowledge constructions in a rich and interactive environment. The general structure of the website and E-course were described. The importance of creating social contexts for learning and autonomous learning were discussed. How the experiments were implemented will be presented in Chapter 7 and Chapter 8.

CHAPTER SEVEN

IMPLEMENTATION OF THE WEBSITE:

EXPERIMENTAL STUDY AND RESULTS

7.1 Introduction to the experiment on practical culture

This chapter describes the implementation of the experimental study evaluating the potential of the website for the teaching of practical culture. There were two comparative studies, one comparing those students who used the multimedia treatment (experimental group) and those who did not have access to the course (control group); and one comparing those who learned the language and culture through the website in their own country (i.e. China) and those who acquired the culture by being personally present in the UK (UK experience group). In the experiment, the control group used the traditional methods of language teaching with written materials and the teacher in the classroom, while, the experimental group used the website (one unit each week) as supplementary materials. The UK experience group were Chinese newcomers in the UK studying for a higher degree. It was anticipated that if, at the end of the course, students in the experimental group could outperform/ surpass the control group in the post-test, then the treatment in the website would have been seen to function better in helping to raise culture awareness than traditional teaching. In addition, if the experimental group performed as well as those from the UK experience group, then the multimedia website for language and culture learning was as effective as being personally present in another culture as far as the practical aspects of

English campus culture, presented in the website, are concerned. The results were analysed statistically by comparing the results of a pre-test and a post-test for the three groups.

The purpose of this experimental study was to establish the effectiveness of an online learning environment for teaching language and culture, by an assessment of the students' achievement (through the post-test) and reaction to the online learning environment (through the questionnaire).

7.2 Subjects:

Altogether 75 Chinese students were involved in this experiment. There were thirty students in the experimental group (twenty-four male students and six female students) and thirty in the control group (twenty-five male students and five female students). Both of these groups were very similar in that they were all PhD candidates majoring in natural science in different departments of Harbin Institute of Technology (HIT), China. They had all learnt English for about 12 years before they were admitted as PhD candidates. All of them had passed the National Entrance Exam for postgraduate candidates, and their English levels were equivalent to IELTS 6.0. All the students in this university were allocated to different classes one by one according to the entrance exam grades, therefore, their general competence was at an equal level.

The UK experience group comprised of 15 Chinese students newly arrived in the UK. They came from all over China to Salford University, UK to follow the

Diploma in Management and English (DME). This group was used to see to what extent they could acquire these defined aspects of English culture by being present in the target culture without the treatment of the website or the E-course.

Although the UK group has a different academic profile to both the experimental and control groups, the UK data enables several essential characteristics to be established. First, do students from different academic backgrounds (PhD, DME) have a similar lack of knowledge of UK culture? Second, does this knowledge increase simply by living in the UK? Third, are any increases in cultural knowledge spread equally across the questions associated with the five pedagogic methods? This last point is crucial in establishing that gains are not associated with particular groups of questions. However, when comparing the experimental and control groups with the UK group performance it must be recognised that more advanced academic students in the UK (PhD rather than DME) may make even larger gains in cultural knowledge. This can only be ascertained by having a PhD group for comparison, which was not feasible within this study.

Students from both the experimental group and the control group had four hours of English per week in a traditional classroom. In addition to that, the experimental group had access to the website for cultural awareness. The time that students in the experimental group spent in the website was expected to be twenty minutes per week for each unit. If some students could complete the whole tasks in one unit with less than twenty minutes, they could log out while some other students might use more time if they wanted to explore more by

following the links. The UK experience group attended a regular DME course in Salford University, the UK.

7.3 Materials

Materials in this study include both materials for the pre-test and post-test and the materials used in the website.

7.3.1 Materials for the pre-test and post-test

The pre-test consisted of thirty questions aiming to explore the following ten dimensions:

Cultural differences in

1. transport (4);

2. registration (4);

3 accommodation (4);

4. in-class behaviour (2);

5. after-class behaviour (2);

6. socialisation (4); holiday/tourism (4);

7. assignment/dissertation (0);

8. graduation (2);

9. job application (2);

10. job interview (2)

(The bracketed numbers indicate the number of questions per topic)

These ten dimensions were also the topics of the ten units in the website. The questions in the tests reflected the topic areas. Each of the ten aspects referred to a rough border rather than a clear-cut line and there was unavoidably some overlap among the features of certain aspects of the culture. The post-test after the treatment of the website was used to see if some of these cultural barriers could be removed and what factors were most effective in removing them. The post-test also aimed to measure whether, by the end of the course, students in the experimental group had acquired the skills such as searching information for themselves and if they could apply these skills to solving real-life problems on their own.

When designing the pre-test, several practical considerations were taken into account: 1). Several pedagogical approaches to the manipulation of knowledge are involved: hyperlink, search, multimedia, reflection, information. (These are explained in 7.3.2). The pre-test was designed to leave a similar proportion of questions for each pedagogical approach; 2). Similar proportions were allocated to each of the ten units related to cultural aspects (see homepage in Appendix II); 3). The items aimed to measure a basic understanding of campus culture, i.e. the knowledge required to enable the new students to survive, such as getting to the university and looking for accommodation.

The content of the test was arrived at by asking groups of newcomers and overseas students who had been in the UK for more than a year what difficulties they had met on arrival. We also asked the International Office from both The University of Hull and the University of Salford to tell us what difficulties they

had encountered when receiving overseas students. We matched this information with what British Council had discovered and to publications in the books and journals regarding this area (see Chapter 4.1). In this way, the questions related to genuine practical barriers.

When designing the tests, another consideration was how to build an appropriate and reliable instrument. The tests was composed of multiple choices. The design followed the procedure outlined below:

- Website contents were analysed according to Bloom's (1956) taxonomy of educational objectives (cognitive domain), namely knowledge, application of the knowledge, analysis, synthesis and evaluation before devising the initial test items.
- A total of 40 test items were designed relating balanced items to the units in the website;
- The test items were checked by both lecturers in China and in the UK specialising in the research of this area. The lecturers in China were teaching the students who would be sent abroad to the western countries and the lecturers in the UK were teaching EFL course. On the basis of their suggestions, the initial formula was modified for the website.

Taking into consideration the elements that were common from the three sources mentioned above (overseas students, international offices and British Council Publications), the topics were decided upon and a multiple-choice questionnaire

of forty items was devised (eight items for each of the five pedagogical approaches mentioned above and four items for each of the unit in the website).

A pilot study was conducted because a preliminary trial of any instrument or research technique is necessary to the development of the research plan. As Oppenheim (1994) stated, "Every aspect of a survey has to be tried out beforehand to make sure that it works as intended" (Oppenheim 1994:47). In the pilot study, the entire procedure was carried out to make sure that all the research steps proceeded smoothly. This should be seen as an effort at condensation of the main study (Tuckman 1994). Accordingly, the pilot study was conducted concerning the following aspects:

- To pinpoint any problems and difficulties, relating to understandability of items or instructions;
- To omit or modify items or questions on the basis of outcomes, if necessary;
- To assess the time needed for implementation.

The pilot study was carried out first with twenty Chinese students in the UK. Four questions were deleted which were ambiguous, where the results were not interpretable. Then, the questions were given to thirty British citizens to answer and see if these questions were properly formulated. As a result of that, another four questions were deleted, which had more than one answer or different answers. The questions were then given to the staff of the University of Salford, including both academic staff and administrative staff who were familiar with

English campus culture. On the bases of these trials and resources, we then developed the second version of the pre-test with thirty-two questions.

Once the pre-test had been developed, each question and the questions as a whole were evaluated by Chinese students in the UK before final administration. The purpose of testing at this stage was to evaluate how respondents interpreted the question's meaning and to check whether the range of response alternatives was sufficient. Before they did the tests, the respondents had been told that the tests were being developed and they were invited to help to improve them. From their responses, some disagreement with our previous expectations were discovered. To clarify these points, some more in-depth interviews were carried out. The information gained in this second pilot was used to revise questions where necessary and shortened the test to thirty items and reorganised the order. Native English speakers' agreed answers were used as the correct answers and the rest were formulated as distracters.

All instructions in the pre-test were verified with the "early-bird" students (those who came before the semester started) before they were used with the subjects of this study. The early-bird students' explanations were carefully checked to confirm that there were no misunderstandings. The same instructions were used in the post-test.

After being tested in the pilot studies, the instruments were considered to be relevant and acceptably worded. On the basis of the results, thirty items remained to be used in the main study. On completion of these procedures, it was felt that

the instruments in their modified form could be used with confidence for the main study. The final version was considered to:

- Cover all the unit's lesson objectives;
- Be stated in clear terms;
- Outline the time which was expected to be sufficient to answer the test questions;
- Be free from extraneous clues that might help students to guess the correct answers;
- Be free of overlapping and
- Help students to be fully aware of the test's purposes.

The following is part of the pre-test (used as a sample here). Four questions pertaining to the topic of accommodation in unit three: including urgent accommodation, price and conditions of an accommodation, and signing a contract for an accommodation.

Accommodation

9. What is the most sensible way for you to manage the first one or two nights after you have arrived in the university before you find your own accommodation?

a. stop at the railway station
b. sit on the chair at the reception desk of the university
c. appeal to university's emergency accommodation
d. look for a cheap Bed & Breakfast Hotel

10. Which of the following is the cheapest place to live?
    a. a detached house in a village
    b. a student residence hall
    c. a shared house on/near the campus
    d. a local family's house

11. In a university accommodation for postgraduates, how many students are there usually in one flat (separate bedrooms but sharing a bathroom and a kitchen)?

    a. 2 b. 4 c. 6 d. 8

12. What is the most important thing to do before you sign the accommodation contract?

    a. make sure that you have got enough money for a year
    b. make sure that you agree with every item in the contract
    c. make sure that you can keep in contact with your family
    d. make sure that the accommodation is near a police station

The final-version of the test (see Appendix III) was used as a pre-test before the experimental group used the website and the same text was administered as a post-test after they had used the website. The given time limit was 20 minutes, which was found to be sufficient in the pilot study and it was also the time all the teachers could make available. The test consisted of thirty questions in the form of multiple choices corresponding to the ten units on the website. There was no weighting between different types of response. All the three groups received the same form of instructions which were given in English.

7.3.2 Materials for the website

Materials used in this website mainly come from three sources: the published books on guidance for overseas students (see Chapter 4); the British council

documents for helping overseas students and the relevant websites for overseas students studying in the UK (for details of the website content, see Appendix II).

In addition to finding out if some of the cultural barriers could be removed with the treatment of the website, this experiment was also designed to detect which approaches were most effective in removing the barriers. These pedagogical approaches included hyperlink, search, multimedia, information, and reflection.

Hyperlink

Hyperlink refers to the addresses in the website selected by the author of the website to which students could turn in order to comprehend the topic and complete the exercises in each unit. These addresses led students to the resources on the web specially selected to fit within the scope of the topic. For example, the hyperlink in unit one presented all the transport systems in the UK, including plane, train, and coach. Thus students could make comparison and figure out a form of transport that would meet their needs for the set tasks.

Search

Students could use search engines to find out more than what was presented in the website. The search engines such as Yahoo, Google, etc were introduced. For example, one task required students to obtain information about opening a bank account after they have arrived. If they used the Yahoo search engine, with "bank account UK" as search criteria, more than 1,000,000 results were produced; with

"student bank account UK" as criteria, the results were limited to 800,000; but if they typed "overseas student open bank account", the results were much more restricted to about 16,200, and selecting the first address provided all the information required to open an account. Students were very much encouraged to try to find a short-cut or the quickest way for obtaining the information.

Multimedia

Multimedia refers to the different combination of media including text + picture/graphs, text + picture + sound, and picture + sound. These media or various combinations of different media spread all over the website. What's more, multimedia in this context was web-based, which means that the materials presented by multimedia could be triggered from the web rather than merely from printed resources.

Information

Information refers to the knowledge that students needed as newcomers to survive in a foreign country. In this context, the information refers to the materials that the author has selected and written for the students to use. However, the medium used was text only. For example, in Unit Two in the website, students were given the information about registration and were simply informed that they should go to a local police station to register with passport, photographs, registration fee and residential address. This form of presentation required little participation from the students and although mounted on the

website, it is little more than traditional form of text information, more usually found in duplicated student handouts. It epitomises a traditional rather than constructivist approach.

Reflection

In this part, the author presented some situations for which students were required to make a judgement, or make a decision. The students were required to use their own understanding of the information materials in the website to make a judgement or decision. For example, in Unit Four in the website, the information of how the classes were run in the UK was given, students had to decide whether they should get involved actively in a discussion or listen to what others were saying attentively. There was, however, no feedback or additional links to help in the decision-making process.

These five pedagogical approaches were used to explore which approaches functioned better if there were improvements in students' culture learning via the website.

7.4 Methodology and implementation

The experiment was carried out during the second semester of academic year 2001-2002. Both the experimental group and the control group students in China and the UK experience group in the UK did the pre-test in the first week of the semester, and the post-test at the end of the semester. In between, traditional

classroom activities were going on and in addition to that the experimental group had one unit of practice in the website each week for the practical culture course for twelve weeks. Meanwhile, the control group just received the normal classroom training.

In the first class contact hour of the second semester 2001-2002, students completed the pre-test. The purpose of doing this was to set up the baseline for this investigation from which to explore if there was a difference between the experimental group who were to use website, the UK experience group and the control group who were not. Another purpose was to find out which aspects of cultural knowledge they had not mastered in their language learning and if these would be cultural problems in their future communication in the foreign country.

7.5 Results of pre-test and post-test for practical culture and data analysis

The purpose of this section is to present the results of the experimental study on practical culture and to investigate the associated hypotheses by applying statistical analysis using the Statistical Package for the Social Sciences (SPSS, version 10.0).

The following experimental hypotheses are based on the assumption that there is no significant difference in the pre-test scores of the three groups prior to the experimental period.

The first experimental hypothesis is that there will be a difference in the post-test scores between the control group, which received no specific teaching or learning activities aimed at the acquisition of knowledge of English culture during their 12 week language course, and the experimental group, which received an additional teaching unit in the website per week during the 12 week language course, and that the difference will favour the experimental group.

The second experimental hypothesis is that there will be a difference in the post-test scores between the control group, which received no teaching or learning activities associated with English culture during their 12 week language course, and the UK experience group, which was exposed to English culture during a semester of study at Salford University, and that the difference will favour the UK experience group.

The third experimental hypothesis is that there will be no difference in the post-test scores between the experimental group, which received an additional teaching unit per week in the website during the 12 week language course, and the UK experience group, which was exposed to English culture during a semester of study at Salford University. In other words, it was predicted that the additional teaching units studied by the experimental group in the website would be as effective at teaching English culture as time spent living in the UK cultural environment.

However, in traditional significance testing it is not the experimental hypothesis that is directly tested but its negation, which is known as the null hypothesis

(Ho). Thus the first experimental hypothesis, when stated in null hypothesis terms, becomes: in the population studied, there is no difference between the test performance for the control and experimental groups. If Ho fails the test, the conclusion is that the experimental hypothesis (which in statistical terms is known as the alternative hypothesis) is correct.

The performance of a statistical test requires knowledge of the sampling distribution or probability distribution of the test statistic. The p-value of a statistic (such as *t* or *F*) is the probability, assuming Ho is true, of obtaining a value at least as extreme as the one actually obtained in the test. Should the p-value be small, indicating that the value is extremely unlikely under Ho, the null hypothesis is rejected in favour of the experimental hypothesis. Ho is rejected if the p-value is less than a small criterion probability known as the significance level, which is traditionally set at 0.05 (the 5 per cent level). When the p-value of a statistic is less than the significance level, the value of the statistic is said to be significant, and the null hypothesis is rejected in favour of the experimental hypothesis, with the result being significant beyond the 5 per cent level.

The experimental hypotheses are re-cast in null hypothesis form as follows:

Ho1. There is NO statistically significant difference in the pre-test scores of the three groups (Control, Experimental and UK experience) prior to the experimental period.

Ho2. There is NO statistically significant difference in the post-test scores of the three groups (Control, Experimental and UK experience) after the experimental period.

However, if Ho1 is true (there is no difference between the groups initially) but Ho2 is false (there is a difference between the groups after the experimental period), then 3 further hypotheses are considered:

Ho3. There is NO statistically significant difference in the post-test scores between the control group, which received no teaching or learning activities associated with English culture during their 12 week language course, and the experimental group, which received an additional website unit per week during the 12 week language course.

Ho4. There is NO statistically significant difference in the post-test scores between the control group, which received no teaching or learning activities associated with English culture during their 12 week language course, and the UK experience group, which was exposed to English culture during a semester of study at Salford University.

Ho5. There is NO statistically significant difference in the post-test scores between the experimental group, which received an additional website unit per week during the 12 weeks language course, and the UK experience group, which was exposed to English culture during a semester of study at Salford University.

The experiment, in which each subject performs under only one of the conditions making up a single independent variable, is said to have one treatment factor with no repeated measures, giving three independent sample scores, one for each of the groups.

The statistical tests applied for Ho1 and Ho2 were parametric one-way ANOVAs (analysis of variance for one-factor between subjects experiments with interval type data), using the Levene test to confirm homogeneity of variance. In addition, post-hoc tests were applied (Bonferroni test) for multiple comparisons (for Ho3 - Ho5), in order to determine differences in means between pairs of test scores (control vs. experimental; control vs. UK experience; experimental vs. UK experience).

Results for the statistical (ANOVA) test for Ho1 are shown in Table 7.1 [see Appendix V: Chapter 7 Tables and Figure, for a complete set of Tables and Figures for this chapter]. The null hypothesis is upheld [$F(2,72) = 0.212$; $p=0.81$], confirming that there is no statistically significant difference in the pre-test scores of the three groups (Control, Experimental and UK experience) prior to the experimental period. This demonstrates that at the start of the experiment the three groups have the same baseline in their knowledge of English culture (as defined by the test items used in the experiment).

Results for the statistical (ANOVA) test for Ho2 are shown in Table 7.2 below. Here, however, the null hypothesis is NOT upheld [$F(2,72) = 15.36$; $p<0.001$], showing that there is a highly statistically significant difference in the post-test

scores of the three groups (Control, Experimental and UK experience) after the experimental period. This demonstrates a change in the relative knowledge about English culture during the experimental period: the three groups start out equal, but differ after exposure to the experimental conditions.

Table 7.2: ANOVA results for H_o2:

H_o2. There is NO statistically significant difference in the post-test scores of the three groups (Control, Experimental and UK experience) after the experimental period [rejected].

ANOVA

SCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	170.320	2	85.160	15.360	.000
Within Groups	399.200	72	5.544		
Total	569.520	74			

Table 7.3 shows the descriptive data for the group pre- and post-test results, which indicates an average 6% improvement over the experimental period for the control group, and larger increases of 14% and 17% for the experimental and UK experience groups. Bonferroni test results for multiple comparisons are also given in Table 7.3, and these confirm the mean improvements from the descriptive statistics tables:

Ho3 is rejected. There is a (highly) statistically significant difference in the post-test scores between the control group, which received no teaching or learning activities associated with English culture during their 12 week language course,

and the experimental group, which received an additional website unit per week during the 12 week language course ($p<0.001$).

Table 7.3: Descriptive statistics and Bonferroni test (for multiple post-hoc analyses) for pre- and post-test results

Pre-test:

Descriptives

SCORE

	N	Mean	Std Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
control	30	13.2667	2.94704	.53805	12.1662	14.3671	8.00	20.00
exptl	30	13.6333	3.38845	.61864	12.3681	14.8986	7.00	20.00
uk	15	13.8667	2.82506	.72943	12.3022	15.4311	9.00	18.00
Total	75	13.5333	3 07709	.35531	12.8254	14 2413	7.00	20 00

Post-test:

Descriptives

SCORE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
control	30	15.3333	2.61736	.47786	14.3560	16.3107	11.00	22.00
exptl	30	17.8000	2.36934	.43258	16.9153	18.6847	14 00	22.00
uk	15	19.1333	1.64172	.42389	18.2242	20.0425	16.00	22.00
Total	75	17.0800	2.77421	.32034	16.4417	17.7183	11 00	22 00

Bonferroni test for multiple post-hoc analyses:

Multiple Comparisons

Dependent Variable: SCORE

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
control	exptl	-2.4667*	.60797	.000	-3.9569	-.9764
	uk	-3.8000*	.74461	.000	-5.6252	-1.9748
exptl	control	2.4667*	.60797	.000	.9764	3.9569
	uk	-1.3333	.74461	.233	-3.1585	.4919
uk	control	3.8000*	.74461	.000	1.9748	5.6252
	exptl	1.3333	.74461	.233	-.4919	3.1585

*. The mean difference is significant at the .05 level.

Ho4 is also rejected. There is a (highly) statistically significant difference in the post-test scores between the control group, which received no teaching or learning activities associated with English culture during their 12 weeks language course, and the UK group, which was exposed to English culture during a semester of study at Salford University ($p<0.001$).

However, Ho5 is upheld. There is no statistically significant difference in the post-test scores between the experimental group, and the UK group.

These results suggest that, as all groups start from the same baseline performance on the cultural knowledge test, and as the post-test scores of the students who lived and studied in the UK during the experimental period were not statistically different from the post-test scores of the students who studied cultural course from the website in China, the gains in cultural knowledge acquired through living in the UK could also be obtained by studying the website materials on a weekly basis.

It is interesting to note that the scores of all groups increased, showing that cultural knowledge did improve even for the control group which simply attended the language teaching sessions. To confirm that there were significant increases in cultural knowledge for all groups paired samples t-tests were carried out, because the performance of the same subjects had been measured under both conditions. This yielded three further null hypotheses:

Ho6. There is NO statistically significant difference between pre- and post-test scores for the Control group.

Ho7. There is NO statistically significant difference between pre- and post-test scores for the Experimental group.

Ho8. There is NO statistically significant difference between pre- and post-test scores for the UK experience group.

Table 7.4: Paired samples tests for pre- and post-test results for H_o6 to H_o8

H_o6. There is NO statistically significant difference between pre- and post-test scores for the Control group [rejected].

Paired Samples Test

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 PRE - POST	-2 0667	2.19613	.40096	-2 8867	-1 2466	-5 154	29	.000

H_o7. There is NO statistically significant difference between pre- and post-test scores for the Experimental group [rejected].

Paired Samples Test

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 PRE - POST	-4 1667	1 20583	.22015	-4 6169	-3 7164	-18 926	29	.000

H_o8. There is NO statistically significant difference between pre- and post-test scores for the UK experience group [rejected].

Paired Samples Test

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 PRE - POST	-5 2667	2.96327	.76511	-6 9077	-3 6257	-6 884	14	000

The results of the analyses in Table 7.4 show that all comparisons are highly statistically significant ($p<0.001$), and that all null hypotheses can be rejected. Cultural knowledge, as measured by the experimental tests, is acquired under all three conditions, but the amount acquired is significantly greater through either the supplementary use of the website or by spending a certain amount of time living in the UK.

7.5.1 Effects of pedagogical approaches

The experimental study was also undertaken to investigate the effects of different pedagogical approaches within the website for promoting the acquisition of cultural knowledge. Items within the test instrument corresponded to the five pedagogical approaches described earlier (hyperlinks; multimedia; search; information; reflection), with 6 items relating to each of the five approaches. Further analysis was conducted to determine if those approaches that demanded more active construction of knowledge (e.g. hyperlinks, multimedia and search) and were related to constructivist theory, actually produced more learning. First, it was assumed that there would be no differences between the test items within the 3 groups. The following null hypothesis was tested using a two-factor mixed ANOVA [three within subjects factors for each of the 3 groups of students, and 5 levels of the strategy factor associated with the pedagogical approaches]:

Ho9. There is NO statistically significant difference between pedagogic approaches (hyperlinks; multimedia; search; information; reflection) on pre-test measures for the 3 subject groups (Control, Experimental, UK experience).

Table 7.5a shows that there are no statistically significant results for the ANOVA test, and confirms the null hypothesis. Thus, there are no differences between the pre-test measures for the five different pedagogical approaches across the three groups of subjects, suggesting that there is no greater difficulty with one or another of the groups of test items for any of the groups of subjects. All three groups of subjects perform at similar levels on each of the five pedagogic strategy approaches, as is shown in the descriptive statistics (Table 7.5b).

It is to be expected that there are no differences between the Control and Experimental groups at the pre-test stage because the groups were drawn from the same student population (HIT PhD candidates) and randomly assigned to the two groups. However, the UK experience group was drawn from a different population (DME, diploma of management and English students at Salford University), and may well have started from a different baseline for cultural knowledge, in which case adjustments would have had to be made to the statistical analysis of post experimental results, to take account of differences at the start of the experiment. However, given that the null hypothesis (Ho9) is confirmed by the statistical analysis, no adjustments to post-experimental comparisons are necessary.

The main experimental hypothesis was that the experimental group would acquire more cultural knowledge than the control group, which has been confirmed, and it was predicted that the increase in knowledge would be more pronounced for those items that required subjects to be active in their construction of that knowledge (e.g. hyperlinks, multimedia and search).

It was difficult to predict the UK experience group's distribution of scores across those items that were specifically associated with pedagogical procedures in the website, because the study had no control over the methods by which these students would gain cultural knowledge. To an extent any UK experience group variability in score distribution across the pedagogic strategy approaches (which, as an intervention, applied only to the Experimental group) would indicate different levels of acquisition difficulty within the natural cultural environment.

The following null hypothesis was again tested using a two-factor mixed ANOVA [three subjects factors for each of the 3 groups of students, and 5 levels of the strategy factor associated with the pedagogical approaches]:

Ho10. There is NO statistically significant difference between groups (Control, Experimental, UK experience) or pedagogical strategy approaches (hyperlinks; multimedia; search; information; reflection) on pre/post-test differences (gains) in scores.

Table 7.6a shows that both within-subjects effects and between-subjects effects are statistically significant, and rejects the null hypothesis. The Bonferroni test for multiple comparisons indicates that the between-subject effects are attributable to differences between the Control group and the Experimental group, and the Control group and the UK experience group, rather than between the Experimental and UK experience groups, and confirms previous results. These results indicate that there are differential effects within the pedagogical

strategy approaches [main effects] and that there is also an interaction between the pedagogical approaches and the three groups of subjects.

Table 7.6a: Two-factor mixed ANOVA for pre/post-test differences in score (gains) on test items associated with different web-site pedagogic strategies (information; reflection; multimedia; hyperlinks; and search) and the 3 groups of subjects (Group: Control, Experimental, UK experience) testing H_o10:

H_o10. There is NO statistically significant difference between groups (Control, Experimental, UK experience) or pedagogical strategy approaches (information; reflection; multimedia; hyperlinks; and search) on pre/post-test differences (gains) in scores [rejected].

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
STRATEGY	Sphericity Assumed	14.390	4	3.598	2.925	.021
	Greenhouse-Geisser	14.390	2.525	5.700	2.925	.044
	Huynh-Feldt	14.390	2.697	5.336	2.925	.040
	Lower-bound	14.390	1.000	14.390	2.925	.092
STRATEGY * GROUP	Sphericity Assumed	25.149	8	3.144	2.556	.010
	Greenhouse-Geisser	25.149	5.049	4.981	2.556	.029
	Huynh-Feldt	25.149	5.393	4.663	2.556	.025
	Lower-bound	25.149	2.000	12.575	2.556	.085
Error(STRATEGY)	Sphericity Assumed	354.200	288	1.230		
	Greenhouse-Geisser	354.200	181.779	1.949		
	Huynh-Feldt	354.200	194.161	1.824		
	Lower-bound	354.200	72.000	4.919		

[Note: the more stringent Greenhouse-Geisser test results apply because Mauchly's test for sphericity is significant, but the results are still significant (for Strategy p=0.044; Strategy x Group p=0.029)]

Table 7.6b: Bonferroni Multiple Comparisons (Group: Control, Experimental, UK experience):

Multiple Comparisons

Measure: MEASURE_1

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
control	exptl	-.4000*	.12433	.006	-.7047	-.0953
	uk	-.6133*	.15227	.000	-.9866	-.2401
exptl	control	.4000*	.12433	.006	.0953	.7047
	uk	-.2133	.15227	.496	-.5866	.1599
uk	control	.6133*	.15227	.000	.2401	.9866
	exptl	.2133	.15227	.496	-.1599	.5866

Based on observed means.

*. The mean difference is significant at the .05 level.

To further explore the nature of the interactions a series of 3 one-way analyses of variance were conducted [one analysis for each of the subject groups, comparing the means of the five pedagogical approaches]. It was anticipated that for the Control and UK experience groups, which had not received instruction specifically linked to the five pedagogical approaches, there would be no statistical difference between the five groups of test items, each of which was associated with a distinct pedagogical approach in the web-site. A statistical difference for the Control group would suggest that some items associated with one (or several) pedagogical group(s) were actually easier than others, and this would distort the results for the other two groups. For example, if the Control group gains for the search test items were shown to be statistically significantly different to the Control gains for the information items, it could be inferred that the search items may be inherently easier; and if the Experimental group search item gains also showed a significant difference it could not then be claimed that the difference was due to the pedagogical approach (searching skill), because the presence of a statistically significant difference in the Control group would

suggest that these test items were actually easier items not only for the Control group but also for the other groups. It could be predicted that if there were statistically significant differences for the Control group, because the items were easier, the differences should also manifest themselves in the UK experience group, adding confirmatory evidence for the hypothesis that the items were basically easier.

Therefore, it was essential for any inferences concerning the effects of the different teaching strategies employed in the web-site, that there should be no significant differences for the Control and UK experience groups, between the 5 groups of items associated with the different pedagogical strategies used on the web-site for the Experimental group. These considerations produced 3 null hypotheses:

Ho11. There are NO statistically significant differences between pedagogical strategy approaches gain scores (hyperlinks; multimedia; search; information; reflection) for the Control group.

Ho12. There are NO statistically significant differences between pedagogical strategy approaches gain scores (information; reflection; multimedia; hyperlinks; and search) for the Experimental group.

Ho13. There are NO statistically significant differences between pedagogical strategy approaches gain scores (information; reflection; multimedia; hyperlinks; and search) for the UK experience group.

Table 7.7: Three one-way ANOVAs (Control, Experimental, UK experience groups) for pre/post-test differences in score on test items associated with different pedagogic strategies (information; reflection; multimedia; hyperlinks; and search).

(b) Experimental Group ANOVA:

H_o12. There are NO statistically significant differences between pedagogical strategy approaches gain scores (information; reflection; multimedia; hyperlinks; and search) for the Experimental group [rejected].

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
STRATEGY	Sphericity Assumed	29.493	4	7.373	8.311	.000
	Greenhouse-Geisser	29.493	2.884	10.225	8.311	.000
	Huynh-Feldt	29.493	3.237	9.112	8.311	.000
	Lower-bound	29.493	1.000	29.493	8.311	.007
Error(STRATEGY)	Sphericity Assumed	102.907	116	.887		
	Greenhouse-Geisser	102.907	83.646	1.230		
	Huynh-Feldt	102.907	93.866	1.096		
	Lower-bound	102.907	29.000	3.549		

The results of the 3 ANOVA tests are given in Table 7.7, and confirm the lack of significant statistical variation between the 5 test groups for the Control and UK experience subjects, confirming null hypotheses Ho11 and H o13 . However, the results for the Experimental (Table 7.7b, above) group are highly significant [Note: because Mauchly's test for sphericity was significant, the more conservative Greenhouse-Geisser test results must be consulted to determine the statistical probability, in this case $p<0.001$, a highly significant result], rejecting null hypothesis Ho12. Thus, there was no statistically significant variation in the gain scores (post-test minus pre-test) for the 5 groups of items, associated with

different web-site instructional methods, for the Control and UK experience groups, confirming that all items were of equal difficulty. Therefore, specific statistically significant differences between mean scores for the Experimental group could be attributed to the differential effects of the 5 pedagogical approaches within the website. These differences were investigated by a series of 10 paired-sample t-tests (1 parametric; 2 confirmatory non-parametric), and the results are given in Table 7.8.

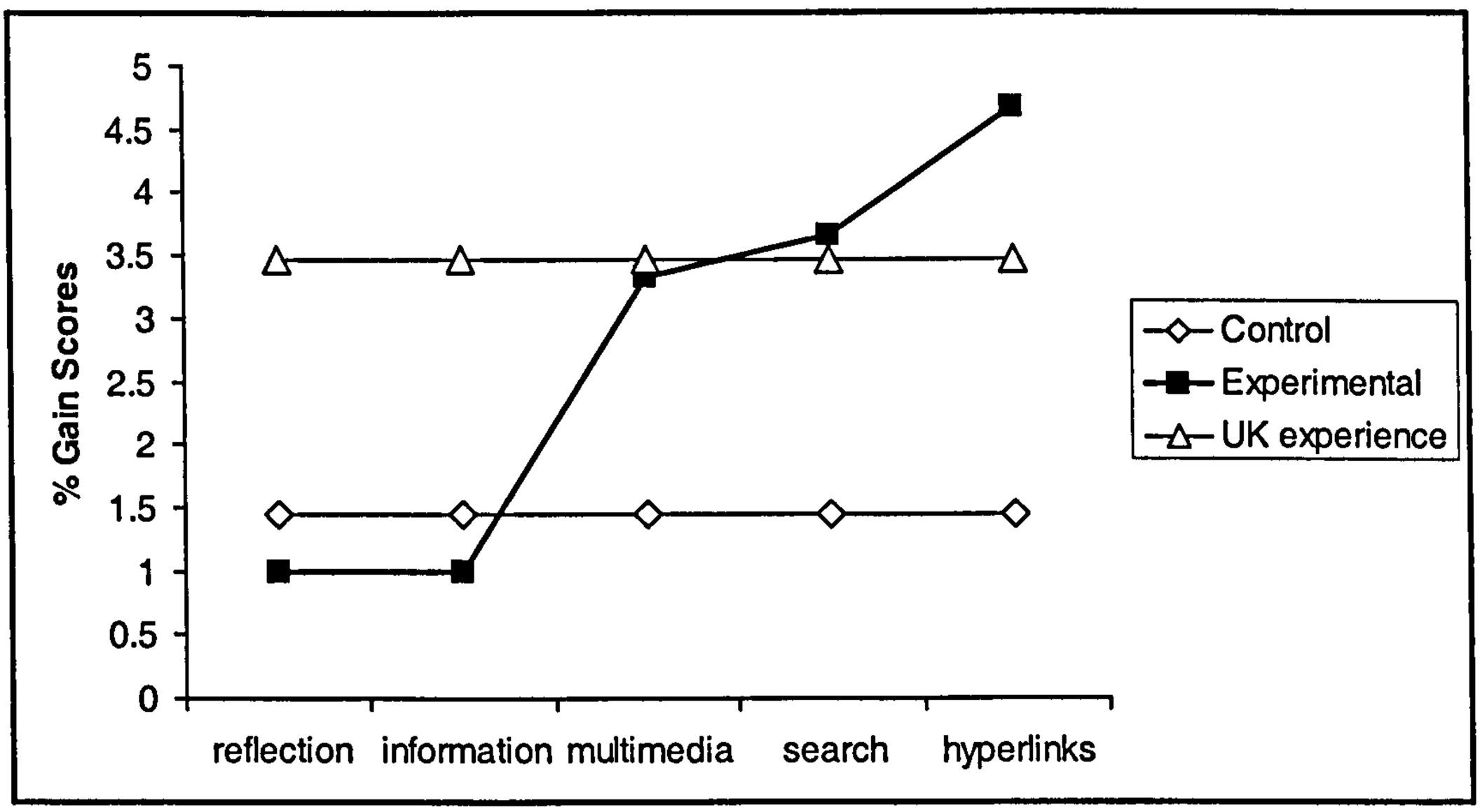
The results are consistent for both parametric and non-parametric tests. For the Experimental subjects using the supplementary web-site materials, there is no statistically significant difference between information items and reflection items; but both of these items show statistically significant differences with hyperlink, multimedia and search items; however, there are no statistically significant differences between hyperlink, multimedia and search items. This is illustrated in Figure 7.1, in which the 5 mean gain scores associated with the different strategies are compared with the general mean gains for the Control and UK experience groups.

Table 7.8: Parametric Paired Samples t-tests for comparisons for pre/post-test gains on test items associated with different pedagogic strategies (information; reflection; multimedia; hyperlinks; and search) for the Experimental Group.

Paired Samples Test

		Paired Differences					t	df	Sig (2-tailed)
		Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	reflection - information	.0000	.94686	.17287	-.3536	.3536	.000	29	1.000
Pair 2	reflection - hyperlink	-1.0667	1.31131	.23941	-1.5563	-.5770	-4 455	29	.000
Pair 3	reflection - multimedia	-.7333	1.25762	.22961	-1.2029	-.2637	-3.194	29	.003
Pair 4	reflection - search	-.8333	1.14721	.20945	-1.2617	-.4050	-3.979	29	.000
Pair 5	hyperlink - information	1.0667	1.31131	.23941	.5770	1.5563	4.455	29	.000
Pair 6	information - multimedia	-.7333	1.08066	.19730	-1.1369	-.3298	-3.717	29	.001
Pair 7	information - search	-.8333	1.17688	.21487	-1.2728	-.3939	-3.878	29	.001
Pair 8	hyperlink - search	.2333	1.71572	.31325	-.4073	.8740	.745	29	.462
Pair 9	hyperlink - multimedia	.3333	1.39786	.25521	-.1886	.8553	1.306	29	.202
Pair 10	multimedia - search	-.1000	1 74889	31930	- 7530	5530	- 313	29	756

Figure 7.1: Mean gain scores on test items associated with different pedagogic strategies (information; reflection; multimedia; hyperlinks; and search) for the Experimental Group; compared with mean gain scores for Control and UK experience groups.



7.5.2 Summary of results:

The results of the analyses presented in Tables 7.1 to 7.8 indicate that, starting from substantially the same pre-experimental baseline knowledge, all groups

made statistically significant gains in their cultural knowledge, but the gains for the experimental and UK experience groups, which were not statistically different from each other, were statistically superior to those made by the control group. This indicates that the web-site materials can produce learning gains in cultural knowledge (of the type measured by the experimental tests) which are substantially the same as those gains made by students living in the target culture.

While there were no differences, for the control and UK experience groups, between gain scores on items associated with different web-site pedagogical approaches (indicating that all items were of similar difficulty), differences were found for the experimental group. These differences showed higher gain scores for those items associated with methods derived from constructivist perspectives on teaching and learning (multimedia, hyperlinks, and search). Gains for more passive web-site presentation methods (information, reflection) were substantially the same as for the control group.

`CHAPTER EIGHT

IMPLEMENTATION OF THE E-COURSE:

EXPERIMENTAL STUDY AND RESULTS

8.1 Introduction to the experiment on English academic writing

This chapter describes the implementation of the E-course for English academic writing and the evaluation of the course. It was a comparative study between those students who used the E-course treatment (experimental group) and those who did not have access to the E-course (control group). The experimental group were aware of the different rhetorical features between Chinese and English while the control group were not. In the experiment, the control group were taught by means of traditional methods of teaching English academic writing with written materials and the teacher in the classroom; the experimental group used the E-course (one unit every other week) as a supplementary course. It was anticipated that if, at the end of the course, students in the experimental group could produce better essays than those from the control group, then the treatment in the E-course had proved effective in helping students with their English academic writing. The study also set out to trace whether the improvement was due to their awareness of contrastive rhetorical features together with the use of online discussion and communication.

The purpose of this experimental study was therefore to establish the effectiveness of an E-course learning environment for the teaching of English

academic writing. The means of doing so was through an assessment of the students' first and last essays. Each of these contrastive features was analysed to see to what extent the students in each of the groups had been enabled to overcome the cultural barriers in English academic writing.

8.2 Subjects:

Altogether 90 Chinese students and 15 English university lecturers were involved in this study. The thirty students in the experimental group and the thirty in the control group were the same subjects as described in Chapter 6.3. In addition to that, thirty Chinese students majoring in Chinese in China were asked to write an essay on the same topic as a comparative parameter to detect their contrastive rhetoric features in Chinese. Among them, fifteen students were from Harbin Teachers' university and fifteen from Heilongjiang University, two of the top universities in Heilongjiang province. All of them were in their final year of their first degree. They had been trained to write in Chinese from primary school to university. None of them had been abroad and therefore, their writing should represent Chinese rhetorical style. Besides, fifteen English university lecturers at Salford University were asked to write model essays for the purpose of this research. Their essays were used as a baseline to compare with the writing style of NNSs.

Students from both the experimental group and the control group had four hours of English language per week (two hours for listening/ speaking and two hours for reading/ writing). In addition to that, the experimental group used the E-

course for academic writing as a supplementary course. The time that students in the experimental group spent on the E-course was expected to be twenty minutes every other week for each unit. If some students could complete the whole of the set tasks in a given unit in less than twenty minutes, they could log out at their will or they could use more time if they wanted to explore more by following further comparison and communications or discussions on-line.

8.3 Materials used in the E-course

This section includes the materials for the contrastive features and the materials used in the E-course.

8.3.1 Materials for studying the contrastive rhetorical features

Chinese students' essays in Chinese (produced by Chinese students in China majoring in Chinese), English Native Speakers' essays in English (produced by lecturers at Salford University), Chinese students' first essays in English (produced by both the experimental and the control group) were compared and contrasted with regard to the various aspects of contrastive rhetoric defined in Chapter 3.2. These essays, as well as the contrastive rhetoric analysis results were put in the E-course. The purpose of doing this was to explore to what extent the following could be established: a) the difference between essay writing style in Chinese and English; b) a baseline description of the essay writing style of the experimental group; c) a "norm" for essay writing by native speakers. The experiment would then show the degree of effectiveness of the E-course in

lessening the cultural barriers in English academic writing by comparing the five rhetorical features for the experimental and the control groups. The analysis of their first essays (pre-experimental period) would thus reveal which of the five rhetoric aspects were the areas where cultural differences existed (by comparing English and Chinese writers), which would indicate which of the areas the E-course should focus on. The analysis of the last essays (post-experimental period) would reveal the extent to which both the experimental and control groups had changed during the experimental period. Any significant differences between the two groups on the five rhetoric measures could then be attributable to the E-course.

8.3.2 Materials for the E-course

The materials used in the E-course came from three sources: One is the model English essays designed for the IELTS practice (published by Cambridge University Press). One is the model English essays written by English native speakers, i.e. lecturers at Salford University. The other is English essays written by Chinese students in this study including students from both the experimental and the control group. In addition to that, during their learning process, students' essays were constantly put into the E-course as an input to trigger online discussion and feedback from both the tutor and other English native speakers. Students' final draft essays were also put into the E-course so that everybody could see how the improvement was made.

8.4 Methodology and implementation

A comparative approach was selected in this study as being particularly appropriate to an evaluation of the E-course. The theory of contrastive rhetoric, as indicated in Chapter 3.2, was applied. A major concern of this study was to measure the improvement in their English academic writing, if any, using the E-course, and to compare this with the teaching methods traditionally used in universities in China.

8.4.1 Methodology of assessing the E-course

Three instruments were used in this study: the analysis of their first essay and last essay, statistical treatment of comparison and a questionnaire to evaluate the impact of the E-course on the achievement.

In the pre-assessment of the E-course in this study, all the students from both experimental group and control group wrote an essay about 400 words on the title of "What do you think are the advantages and disadvantages of higher education and to what extent you have benefited from higher education?". Then, the essays were analysed according to the five aspects of contrastive rhetoric discussed in Chapter 3.2. To obtain an objective comparative view for these five aspects, the essays written by NS (on the same topic) were used as a parameter and those from the Chinese students were used as another parameter to compare the contrastive features. Averages and percentages of the five features would be analysed in both their first and last essay to see the shift or pattern of their writing

style. Then students' responses to the E-course were also obtained through a questionnaire. The questionnaire had to be designed for both the website and the E-course, and therefore only question 6 to question 8 referred to the E-course.

8.4.2 Methodology of marking essays

The essay rating system in HIT, China is an holistic grade on a scale of 100. The students' names were sealed and their essays were numbered. The first rater gave a mark on the essay but did not write the mark on the paper, instead put it in the computer in the order of number. Then, the second rater examined the essay and put his mark in the computer. If the two marks were different by more than 10 points, the third person, re-examined the essay and gave his opinion. They would then discuss it until they reached a common agreement.

Consequently, each essay in this research was also graded holistically on a scale of 100 by three highly-qualified, independent raters in HIT, China. In no case did the raters disagree by more than 10 points, thus strongly suggesting that they were applying similar standards in evaluating the essays. Small differences in grades were averaged to arrive at a single, final grade based on the raters' impression of its quality.

For the purpose of this research, the five criteria presented in Chapter 3.2 were used as quantitative measures because they provided quantitative data in reasonably comparable forms across languages. The same definitions of terms (thesis statement, topic sentences etc) were applied to both sets of data (English

and Chinese). The method proved useful in that it revealed rhetorical patterns emerging from the two cultures. The raw numbers from the coded essays were analysed to determine mean and percentages. The researcher identified, counted and analysed the data (thesis statement, topic sentence, paragraphs, metaphors and discourse markers) for later statistical analysis. Two lecturers in HIT double checked to see if these were correctly identified, counted and analysed in addition to giving the overall mark of each essay. This mark was part of the students' degree course.

8.4.3 Implementation of the E-course

The experimental research was carried out during the second semester of the academic year 2001-2002. Both the experimental group and the control group students in China wrote their first essay in the first contact hour of the semester, and the last essay at the end of the semester. In between, traditional classroom activities were going on and in addition to that the experimental group had one unit every other week in the E-course for the academic course. Meanwhile, the control group just received the normal classroom training with nothing additional. In addition, the experimental group had the opportunity a) to consult the example essays b) to get feedback from others c) to communicate with the tutor and native speakers online. The following example shows how students used these means to develop their writing.

Process of the E-course

Step 1: students wrote their first draft. Take one essay for example,

What are the advantages and disadvantages of higher education and to what extent higher education has helped you to achieve your goal?

Do you know what the purpose of university education is? To what extent the university education had helped you to achieve your goal? I have studied in HIT for six years, where I got my bachelor and Master degree. Now I am studying for my doctor degree. When I just came six years ago, I had some questions in my brain -- why do I come here? What can I get here? But as a freshman, I could not answer myself then. Now as an old student, I think I have something to say.

In the term of bachelor study, there are a lot of things for students to study with the four-year university education. They have to learn self-study. They have to study everything they need in the future. In middle school, students get most knowledge from their teachers. Teachers tell knowledge they know to the students. Students remember it. This is the general procedure. In this process, students are passive. They cannot choose the kind of knowledge. They cannot control the speed of their study. We call this kind of teaching spoon-feeding. In the university, teachers teach students a little knowledge, which is superficial. They ask student to solve some difficult problems with the knowledge learned by themselves. This teaching helps students to learn self-study step by step.

To most graduate students, they will face all kinds of actual problems in their whole lives. They have to grasp the method for solving special single problem. They have to solve all kinds of complex problems. They have to learn how to search relational information, how to design the blue print, how to implement it at last. Graduate students can get some research ability from their

mentor. Their mentors cannot give them all the ability of research. They have to bring up it by themselves. So the training of the ability of research is important for graduate students.

In my bachelor study, I have got a good training of self-study. I studied a course of C language by myself, without attending even one class. I passed the exam of that course. I have not got enough ability for research. I think the reason may be that I haven't touched many actual tough problems. I think I will be good at research with the increase of actual experience.

In this essay, the first paragraph was apparently background information leading readers in. The second paragraph was to "sustain", explaining how he becomes an "old" student, and why he has something to say. The third paragraph is to "turn" from getting knowledge from middle school and undergraduate to research at postgraduate stage. The last paragraph is to "sum" how he combined knowledge and research together and all this is revealed through his own experience. In between, the student used a metaphor "spoon-feeding" in paragraph 2.

Step 2: compare the first draft with the contrastive features in the E-course

After writing their first draft, students were asked to compare their draft with the contrastive features in the E-course. They posed the questions for themselves: what is the main idea of my essay -- thesis statement; what are the topic sentences of each paragraph; are the metaphors/proverbs appropriate; have my

discourse markers helped make my ideas coherent? Based on these questions, they revised their first draft. In the case of the above essay, the student wrote:

"The main idea of this essay should be: The purpose of higher education is to train students' self-study and research ability.

The topic sentence in my second paragraph should be university should train students' self-study ability; the topic sentence in my third paragraph should be university should train students' research ability; and the topic sentence in my last paragraph should be how the self-study ability and research ability combined shown in my own experience.

In addition, I need to put some discourse markers to help with the flow of ideas." He sent this message to the teacher. The teacher encouraged him by saying that these thoughts were right. And in addition to that, since the topic is higher education, think about how to treat the part of your middle school experience.

At this stage, the student became aware of the rhetoric features such as topic sentence and topic-support sentence structures.

Step 3: writing the second draft

Taking these ideas into consideration, here is his second draft:

Do you know what the purpose of university education is? To what extent the university education helps you to

achieve your goal? I have studied in HIT for six years, where I got my bachelor and Master degree. Now I am studying for my doctor degree. When I just came six years ago, I had some questions in my brain -- why do I come here? What can I get here? As a freshman, I could not answer myself then. Now as an old student, I think I have something to say. **The purpose of higher education is to train students' self-study and research ability.**

At the stage of bachelor study, it is important for the university to train students the self-study ability. In the term of bachelor study, there are so many things for students to study with the four year university education that they have to learn self-study. They have to study everything they need in the future. Compared with middle school stage, students get most knowledge from their teachers. In the learning process, students are passively receiving, which is spoon-feeding. Whereas at the university stage, teachers teach students a little knowledge. Instead, they ask students to read a lot of books and to think as deeply as they can and to solve some difficult problems with the knowledge learned by themselves.

At the stage of masters and doctor study, it is important to train students the research ability. To most graduate students, they will face all kinds of actual problems in their whole lives. They have to grasp the method for solving not only special single problems they are facing now but also more complex problems they will face in the future. They have to learn how to search relevant information, how to design the blue print, and how to implement it at last. Although graduate students can learn some research skills from their mentor, their mentors cannot give them the ability of research. They have to cultivate their research ability themselves. Therefore, the training of the ability of research graduate students is one of the purposes of university education.

As for me, I am good at self-study but not at research. I got a good training of self-study during my bachelor's study. For example, I studied a course of *C* language by myself, without attending even one class and I passed the exam of that course. However, I have not got enough ability for research. I think the reason may be that I haven't touched many actual tough problems. I think I will be good at research with the increase of actual experience.

(note: words underlined are discourse markers; sentence in bold are topic sentences; sentence both in bold and underlined is thesis statement)

Step 4: discussion online

Then, students put their revised draft to the bulletin board. Because they were writing on the same topic, they had a lot to talk about. They made comments of what they thought would be better and consult the model essays. As for this essay, one student said (in the first paragraph), "*I have studied in HIT for six years, where I got my bachelor and Master degree. Now I am studying for my doctor degree. When I just came six years ago, I had some questions in my brain -- why do I come here? What can I get here? As a freshman, I could not answer myself then. Now as an old student, I think I have something to say*" is redundant and this can be simply changed into "In my opinion" because to get rid of the redundant will make the thesis statement more distinguished. Some other students commented "The topic sentence in the second paragraph is '*at the stage of bachelor study, it is important for the university to train students the self-study ability*'. The following sentence should explain why it is important. The second sentence in the second paragraph can be changed into "Because during the process of bachelor study, there are *so* many things for students to learn that they

have to do part of learning by self-study. Besides, the skill of self-study can be applied to their work in the future".

Step 5: final essay

Taking all these comments, including comments from his NS peer, into account and consulted the NS model essays, the student produced his final essay:

> Do you know what the purpose of university education is? To what extent the university education helps you to achieve your goal? In my opinion, **the purpose of higher education is to train students' self-study and research ability.**
>
> **At the stage of undergraduate study, it is important for the university to train students the self-study ability.** Because during the process of undergraduate study, there are so many things for students to learn that they have to do part of the learning by self-study. Besides, the skill of self-study can be applied to their work in the future. Compared with secondary school study, which is mainly spoon-feeding, university teachers teach students less knowledge, but guide students to read a lot of books after class, to think as deeply with their own minds and present some difficult problems for them to solve on their own. Actually, this is the training of their self-study.
>
> **At the stage of graduate study, it is important to train students the research ability.** They have to learn how to search relevant information, how to design the blue print, and how to integrate theory with practice. Although graduate students can learn some research skills from their mentor, their mentors cannot give them the ability of research. They have to cultivate their research ability themselves. Therefore, **the training of**

the ability of research graduate students is one of the purposes of university education.

As for me, I gained certain self-study ability while I was doing my first degree but not competent in my research ability yet. For example, I studied a course of *C* language by myself, without attending even one class and I passed the exam of that course. However, I have not done my research with the C language that I learnt. I think the reason may be that I haven't touched many actual tough problems. I think I will be good at research with the increase of actual experience.

After the training in the E-course, step by step, through the whole semester, students' writing styles started to change. The pattern of this change can be seen from the experiment results in the next section.

8.5 Results from the E-course for academic writing and data analysis

The purpose of this section is to present the results of the experimental study on rhetorical styles and to investigate the associated hypotheses by applying statistical analysis using the Statistical Package for the Social Sciences (SPSS, version 10.0).

The following experimental hypotheses for such indicators as the number of paragraphs or number of discourse markers in an essay are based on the assumption that there is no significant difference in the number of words written by the groups. Any significant differences in the number of words in the essays written by the groups will require adjustment of the hypotheses to take account of the differences. In each group the subjects were asked to write 400 words on the

given topics, but there are many factors that may affect how closely subjects approximate to the required number of words, such as fluency in the given language medium.

The first experimental hypothesis is that there are no differences in the number of words written by the subjects in the four different groups (Control, Experimental, UK, and Chinese) before and after the experimental period. The essays of the Experimental and Control groups, written after the experimental study, were compared with the essays of UK and Chinese groups written before the experimental period.

Again, in traditional significance testing it is not the null hypothesis (H_o) that is directly tested. Thus the first experimental hypothesis thus becomes two null hypotheses:

H_o1. There is NO statistically significant difference in the number of words written by the four groups (Control, Experimental, UK, and Chinese) prior to the experimental period.

H_o2. There is NO statistically significant difference in the number of words written by the two groups (Control and Experimental) after the experimental period, when compared with the two groups (UK and Chinese) prior to the experimental period.

The experiment, in which each subject performs under only one of the conditions making up a single independent variable, is said to have one treatment factor with no repeated measures, giving four independent sample scores, one for each of the groups.

The statistical tests applied for H_o1 and H_o2 were parametric one-way ANOVAs (analysis of variance for one-factor between subjects experiments with interval type data), using the Levene test to confirm homogeneity of variance. In addition, post-hoc tests were applied (Bonferroni's test) for multiple comparisons, in order to determine differences in means between pairs of test scores.

Results for the statistical (ANOVA) test for H_o1 are shown in Table 8.1 (see Appendix VI: Rhetoric Tables, for a complete set of Tables and Figures for this chapter). The null hypothesis is rejected [$F(3,101) = 12.16$; $p<0.001$], indicating that there is a statistically significant difference in the pre-experimental number of words written by the four groups (Control, Experimental, UK and Chinese) prior to the experimental period. This demonstrates that at the start of the experiment some of the groups were not comparable in terms of the lengths of the essays. The Bonferroni multiple comparison tests clearly indicate where the differences lie: the group writing in Chinese had written significantly more words than the Control and Experimental group, and this would have to be taken into account in further analyses with these groups.

Results for the statistical (ANOVA) test for H_o2 are shown in Table 8.2 and again the null hypothesis is rejected [$F(3,101) = 5.91$; $p=0.001$], indicating that

there is a statistically significant difference in the post-experimental number of words written by the Control and Experimental groups after the experimental period and the essays written by the UK and Chinese subjects before the experimental period. This demonstrates that at the end of the experiment some of the groups were not comparable in terms of the lengths of the essays. The Bonferroni multiple comparison tests indicate that the group writing in Chinese had written significantly more words than the Control and Experimental group, and again this would have to be taken into account in further analyses with these groups.

These results suggest that when comparing the Control and Experimental group essays with the Chinese essays the number of words must be taken into account. In this case certain measures (e.g. number of discourse markers) were recalculated as average figures per 100 words.

In order to determine the extent to which the E-course could help students to adjust to the English rhetorical style, it is necessary to confirm that, with the measures used in this study, there were real differences between the English style of writing and the Chinese students writing in Chinese. The experimental hypothesis is that on the measures used to evaluate rhetorical styles (discourse markers, number of paragraphs, use of metaphor and proverbs, changes of topic within a paragraph and position of the thesis statement) there are statistically significant differences between the UK and Chinese subjects. This results in a series of null hypotheses.

H_o3. There is NO statistically significant difference in the number of discourse markers used by the two groups (UK and Chinese) in their essays.

H_o4. There is NO statistically significant difference in the number of paragraphs used by the two groups (UK and Chinese) in their essays.

H_o5. There is NO statistically significant difference in the number of students in the two groups (UK and Chinese) using metaphors and proverbs in their essays.

H_o6. There is NO statistically significant difference in the number of students in the two groups (UK and Chinese) changing topics in paragraphs in their essays.

H_o7. There is NO statistically significant difference in the position of the thesis statement used by the two groups (UK and Chinese) in their essays.

Hypotheses H_o3 and H_o4 use counts of words and paragraphs as interval data, and are evaluated by ANOVAs; whereas, hypotheses H_o5 to H_o7 deal with categorical data and are evaluated by Crosstabs analysis which uses Chi-square to determine significance. The results of the statistical tests are shown in Table 8.3. All the hypotheses are rejected, confirming that there are measurable differences in those aspects of the style of writing, which are the subject of this investigation, for UK subjects writing in English and Chinese subjects writing in Chinese. The results of these tests confirm previous results in the field of comparative rhetoric.

Table 8.3: Results for H_o3 - H_o7:

H_o3. There is NO statistically significant difference in the number of discourse markers used by the two groups (UK and Chinese) in their essays [rejected].

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total discourse markers	uk	15	16.4667	4.85308	1.25306
	chinese	30	1.7333	1.17248	.21406

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total discourse markers	Equal variances assumed	26.279	.000	15 892	43	.000	14.7333	.92711	12 86364	16 60303
	Equal variances not assumed			11.590	14 823	.000	14.7333	1.27121	12 02099	17.44568

H_o4. There is NO statistically significant difference in the number of paragraphs used by the two groups (UK and Chinese) in their essays [rejected].

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total number of paragraphs	uk	15	5.1333	1.50555	.38873
	chinese	30	4.0000	.74278	.13561

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total number of paragraphs	Equal variances assumed	13.332	.001	3.402	43	.001	1.1333	.33318	.46142	1.80525
	Equal variances not assumed			2 753	17.490	.013	1.1333	.41171	.26656	2.00011

H_o5. There is NO statistically significant difference in the number of students in the two groups (UK and Chinese) using metaphors and proverbs in their essays [rejected].

GROUP * Pre-experimental metaphor present Crosstabulation

			Pre-experimental metaphor present		
			no	yes	Total
GROUP	uk	Count	13	2	15
		% within GROUP	86.7%	13.3%	100.0%
	chinese	Count	10	20	30
		% within GROUP	33.3%	66.7%	100.0%
Total		Count	23	22	45
		% within GROUP	51.1%	48.9%	100.0%

Table 8.3 (cont.)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11.383[b]	1	.001		
Continuity Correction[a]	9.349	1	.002		
Likelihood Ratio	12.390	1	.000		
Fisher's Exact Test				.001	.001
Linear-by-Linear Association	11.130	1	.001		
N of Valid Cases	45				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.33.

H_o6. There is NO statistically significant difference in the number of students in the two groups (UK and Chinese) changing topics in paragraphs in their essays [rejected].

GROUP * Pre-experimental topic changes Crosstabulation

			Pre-experimental topic changes		
			no	yes	Total
GROUP	uk	Count	15		15
		% within GROUP	100.0%		100.0%
	chinese	Count	19	11	30
		% within GROUP	63.3%	36.7%	100.0%
Total		Count	34	11	45
		% within GROUP	75.6%	24.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.279[b]	1	.007		
Continuity Correction[a]	5.429	1	.020		
Likelihood Ratio	10.624	1	.001		
Fisher's Exact Test				.008	.005
Linear-by-Linear Association	7.118	1	.008		
N of Valid Cases	45				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.67.

Table 8.3 (cont.)

H_o7. There is NO statistically significant difference in the position of the thesis statement used by the two groups (UK and Chinese) in their essays [rejected].

GROUP * Pre-experiment thesis paragraph Crosstabulation

			Pre-experiment thesis paragraph					Total
			1.00	2.00	3.00	4 00	5.00	
GROUP	uk	Count	9	2		2	2	15
		% within GROUP	60.0%	13.3%		13.3%	13.3%	100.0%
	chinese	Count	5	1	6	18		30
		% within GROUP	16.7%	3.3%	20.0%	60.0%		100.0%
Total		Count	14	3	6	20	2	45
		% within GROUP	31.1%	6.7%	13.3%	44.4%	4.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.436[a]	4	.001
Likelihood Ratio	22.215	4	.000
Linear-by-Linear Association	6.971	1	.008
N of Valid Cases	45		

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .67.

To consider the effects of the E-course on the Experimental group comparisons will be made with the Control group that did not have access to the E-course materials, and it is therefore essential that there should be no differences in the

various measures between the Experimental and Control groups. The allocation of subjects to the two conditions (Experimental and Control) should ensure that this is the case, but the application of appropriate statistical tests will confirm this expectation. This leads to a similar group of null hypotheses as for the UK and Chinese subjects:

H_o8. There is NO statistically significant difference in the number of discourse markers used by the two groups (Experimental and Control) in their pre-experimental period essays.

H_o9. There is NO statistically significant difference in the number of paragraphs used by the two groups (Experimental and Control) in their pre-experimental period essays.

H_o10. There is NO statistically significant difference in the number of students in the two groups (Experimental and Control) using metaphors and proverbs in their pre-experimental period essays.

H_o11. There is NO statistically significant difference in the number of students in the two groups (Experimental and Control) changing topics in paragraphs in their pre-experimental period essays.

H_o12. There is NO statistically significant difference in the position of the thesis statement used by the two groups (Experimental and Control) in their pre-experimental period essays.

However, as Table 8.4 shows (see Appendix: Rhetoric Tables), unlike the UK-Chinese comparison, all null hypotheses are confirmed. There are no statistically significant differences between the Experimental and Control groups at the start of the experiment on the measures used, which had discriminated between the UK writers in English and the Chinese writers in Chinese.

The 60 experimental study subjects showed essentially the same characteristics in their pre-experimental essays, and can therefore be considered as a combined study group (of 60 subjects) for certain analyses. These subjects had studied English for a number of years and it is therefore essential to know to what extent their initial writings conformed to the English or Chinese rhetorical style. If, for example, there were no differences between the combined study group and the UK group, there would be little or no room for change in their style of writing. However, if there were no differences when compared with the Chinese group of writers, more change would be possible from interacting with the E-course. Taking the combined experimental study subjects and Chinese writers first, a further set of null hypotheses are generated, but account must be taken of the significant differences found between the groups in the number of words written [H_o1 rejected]. An adjustment is only necessary for scores for the number of discourse markers and the number of paragraphs. This was effected by dividing these measures by the total number of words in the essays of the two groups and multiplying by 100, to give a value per 100 words:

H_o13. There is NO statistically significant difference in the number of discourse markers used by the combined experimental study group in their pre-

experimental period essays and the essays written in Chinese by Chinese subjects, when controlled for the relative number of words in the essays.

H_o14. There is NO statistically significant difference in the number of paragraphs used by the combined experimental study group in their pre-experimental period essays and the essays written in Chinese by Chinese subjects, when controlled for the relative number of words in the essays.

H_o15. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and Chinese group writing Chinese) using metaphors and proverbs in their pre-experimental period essays.

H_o16. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and Chinese group writing Chinese) changing topics in paragraphs in their pre-experimental period essays.

H_o17. There is NO statistically significant difference in the position of the thesis statement used by the two groups (combined experimental study group and Chinese group writing Chinese) in their pre-experimental period essays.

The results of the analyses (independent t-tests for H_o13 and H_o14; Crosstabs with Chi-square for H_o15 to H_o17) are shown in Table 8.4 (see Appendix: Rhetoric Tables). All null hypotheses except H_o17 are rejected, showing that the subjects who were about to take part in the experimental study showed characteristics which were already significantly different to the Chinese style of

writing, and the tendency was towards an English rhetorical style in most measures. The exception is the placement of the thesis statement, and here the experimental study group of 60 subjects was not found to be significantly different from the Chinese writers: the thesis statement tended to be found in the later paragraphs of the essay, rather than in the first or second paragraph as is the case with English writers. However, if the 60 subjects forming the experimental study group had already shifted significantly towards the UK rhetorical style on all but one measure there may be little room for further shifts, unless there were still significant differences between the experimental study group and the UK writers' styles. This was tested by a further series of null hypotheses:

H_o18. There is NO statistically significant difference in the number of discourse markers used by the combined experimental study group in their pre-experimental period essays and the essays written in English by UK subjects.

H_o19. There is NO statistically significant difference in the number of paragraphs used by the combined experimental study group in their pre-experimental period essays and the essays written in English by UK subjects.

H_o20. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and UK group) using metaphors and proverbs in their pre-experimental period essays.

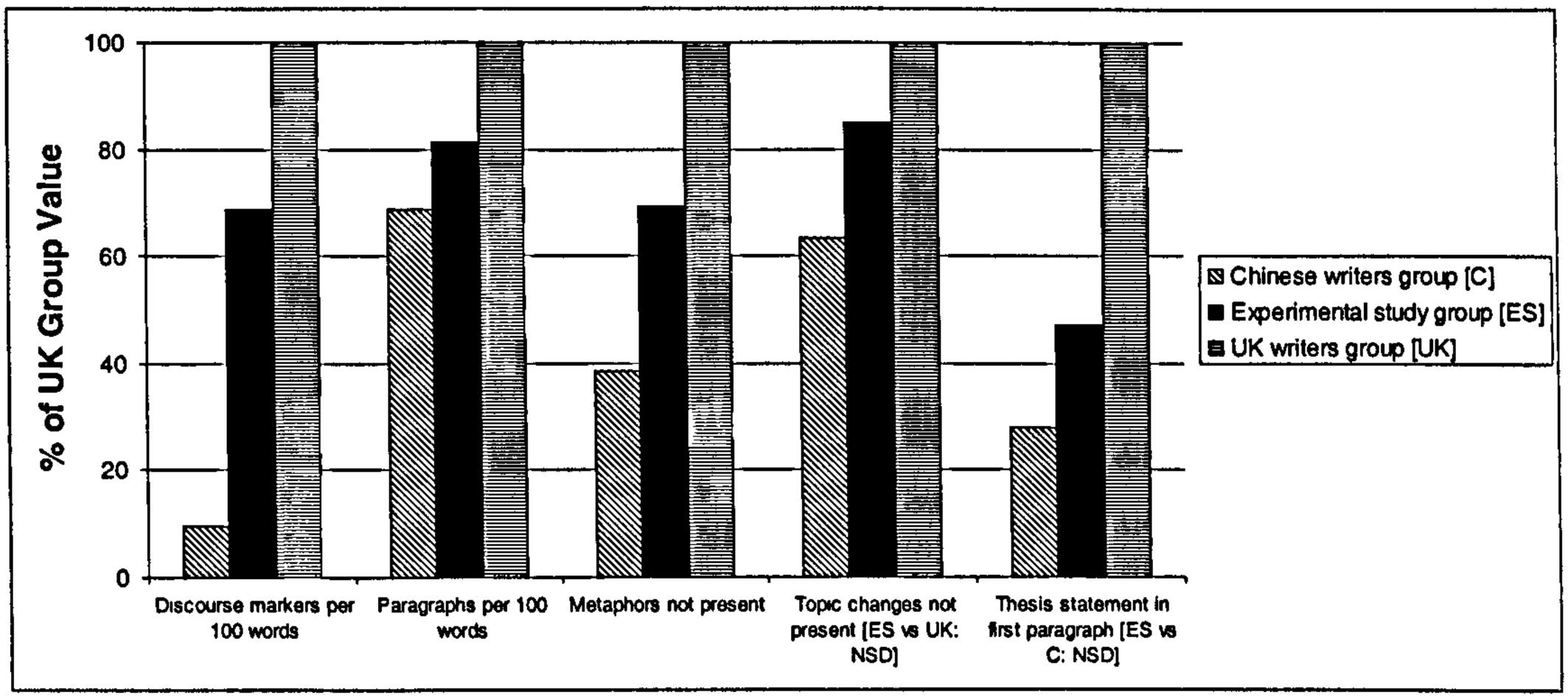
H_o21. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and UK group) changing topics in paragraphs in their pre-experimental period essays.

H_o22. There is NO statistically significant difference in the position of the thesis statement used by the two groups (combined experimental study group and UK group) in their pre-experimental period essays.

The results of the analyses (independent t-tests for H_o18 and H_o19; Crosstabs with Chi-square for H_o20 to H_o22) are shown in Table 8.5 (see Appendix: Rhetoric Tables). All null hypotheses except H_o 21 are rejected, showing that the subjects who were about to take part in the experimental study were different from the Chinese writers, with a tendency towards an English rhetorical style, also remained significantly different from the UK writers. The exception is the number of students who change topics in one paragraph, and here the experimental study group of 60 subjects was not found to be significantly different from the UK writers: they both tend to stick with one topic per paragraph.

Figure 8.1: Comparative values on five measures of rhetorical style for the Experimental Study Group (60 subjects), Chinese Writers Group (30 subjects) and UK Writers Group (15 subjects), expressed as percentage of UK Group scores.

[Note: all differences between Chinese writers and UK writers statistically significant; differences between Chinese writers and Experimental Study Group, except thesis placement, statistically significant; differences between UK writers and Experimental Study Group, except topic changes in paragraphs, statistically significant.]



These results show the 60 experimental study subjects have reached a mid-way position with regard to their rhetorical styles: on most measures they are significantly different from both the Chinese writers and the UK writers. They remain, however, indistinguishable from the Chinese writers in the placement of their thesis statement, but have attained the English approach of limiting their paragraphs to one topic. These results are shown graphically in Figure 8.1.

The purpose of the experimental study was to allow half the group to study the E-course, which was designed to illustrate the differences between English and Chinese rhetorical styles, in order to determine the extent of changes in the style of the E-course group. These changes were compared with the control group, which received no training in rhetorical skills, and the UK writers. The experimental hypothesis was that studying the E-course would change the rhetorical style of this group, making it indistinguishable from the UK group. Consequently, as the UK group differed from the experimental study group of 60 students before the experimental period, it was also anticipated that there would be a significant difference in the measures between the E-course group and the

control group, except for the "topic changes within a paragraph" measure where no difference between the UK writers and the study group had emerged prior to the experiment. Table 8.6 (see Appendix VI: Rhetoric Tables) shows that, as for the pre-experimental essays, there are no differences between the number of words written by the 3 groups, and consequently no adjustments are necessary for the comparisons.

H_o23. There is NO statistically significant difference in the number of discourse markers used by the E-course experimental group and the control group in their final post-experimental period essays and the essays written in English by UK subjects.

H_o24. There is NO statistically significant difference in the number of paragraphs used by the E-course experimental group and the control group in their final post-experimental period essays and the essays written in English by UK subjects.

H_o25. There is NO statistically significant difference in the number of students in the experimental [E-course] group and control group using metaphors and proverbs in their final post-experimental period essays and the number of students in the UK group using metaphors and proverbs in the essays written in English by UK subjects.

H_o26. There is NO statistically significant difference in the number of students in the experimental [E-course] group and control group changing topics in

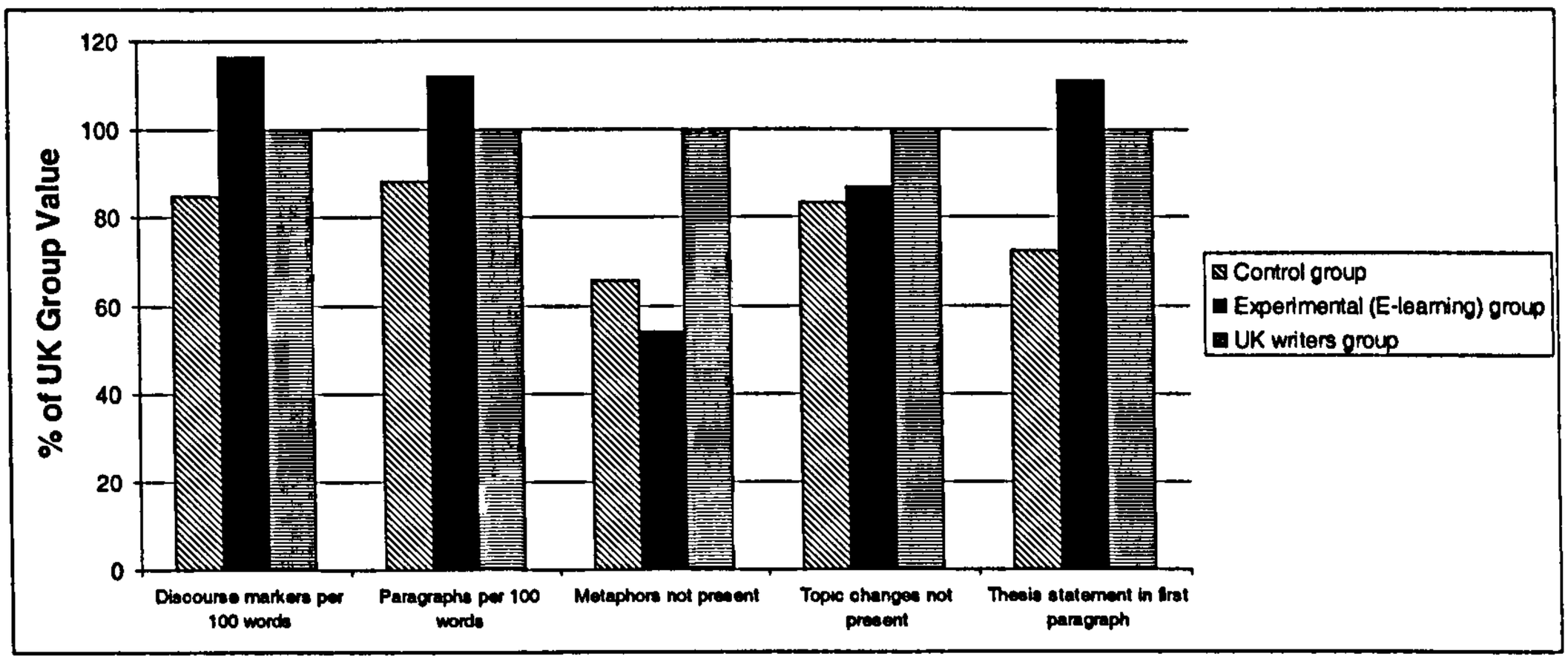
paragraphs in their final post-experimental period essays and the number of students in the UK group changing topics in paragraphs in the pre-experimental essays written in English by UK subjects.

H_o27. There is NO statistically significant difference in the position of the thesis statement used by the experimental [E-learning] group and control group in their final post-experimental period essays and the pre-experimental essays written in English by UK subjects.

One-way ANOVAs and Bonferroni multiple t-tests are used to test H_o23 and H_o24; and Crosstabs with Chi-square for H_o25 to H_o27, and the results are given in Table 8.7 (see Appendix VI: Rhetoric Tables), and summarised in Figure 8.2.

Only H_o26 is confirmed, as expected from the pre-experimental results. Both groups of subjects in the experimental study have already attained the UK style of not changing topics within paragraphs before the study was undertaken.

Figure 8.2: Comparative values on five measures of rhetorical style for the Experimental (E-learning) Group (30 subjects), Control Group (30 subjects) and UK Writers Group (15 subjects), expressed as percentage of UK Group scores.



The Bonferroni tests for H_o23 show that there are statistically significant differences between all groups. The control group uses significantly less discourse markers than the UK group, as was the case before the experimental study. However, the E-course group now uses significantly more discourse markers than the control group, and also more than the UK group. The E-course group has shifted the use of markers beyond that found in the typical UK group of writers.

For the number of paragraphs the Bonferroni tests (for H_o24) show that while the control group have shifted to a position in which they cannot be distinguished statistically from the UK group, the E-course group has increased its use of paragraphs to the extent that it can be distinguished statistically not only from the control group but also from the UK group. The E-course has been very effective at increasing the use of paragraphs, to the extent that there is a tendency to use even more than the UK group of writers.

The use of metaphors (H_o25) produces a similar pattern to the pre-experimental measures: although there is a statistical difference between the three groups, this takes the form of no difference between the E-course and control group, but a difference between both of these groups and the UK group. In effect the pattern for metaphors in Figure 8.2 is not significantly different to the pattern shown in Figure 8.1. Essentially, the E-course does not reduce the number of subjects using metaphors and proverbs in their writing, the group maintaining its Chinese style of rhetoric in this respect.

The position of the thesis statement (H_o26) shows a statistically significant difference between the three groups, but of the multiple comparisons only the difference between the E-course group and the control group is significant. This suggests that although at the outset of the experimental period there is a difference between the number of the English writers placing the thesis statement early in the essay in the UK and experimental study group late in the essay, this difference is removed during the experimental period: both the control and E-course groups are now indistinguishable in a statistical sense from the UK group. However, the difference between the control and E-course experimental group is now significant, showing that although there is a general shift towards the English rhetorical style during the experimental period, the E-course programme is more effective with 67% of the subjects placing the thesis statement in the first paragraph, compared with 43% for the control group; 60% of the UK group place the thesis statement in the first paragraph.

Summary

The measures used to evaluate rhetorical styles (discourse markers, number of paragraphs, use of metaphor and proverbs, changes of topic within a paragraph and position of the thesis statement) were shown to discriminate statistically between the UK and Chinese subjects, writing in English and Chinese respectively.

The experimental study group of 60 Chinese PhD students held a midway position in their style of writing prior to the experimental period: on three measures (number of discourse markers, number of paragraphs and position of the thesis statement) they were significantly different from both the Chinese writers and UK writers. For changes of topic within a paragraph they had already adopted the English rhetorical style; but for the use of metaphors and proverbs they remained close to the style used by the Chinese group writing in Chinese.

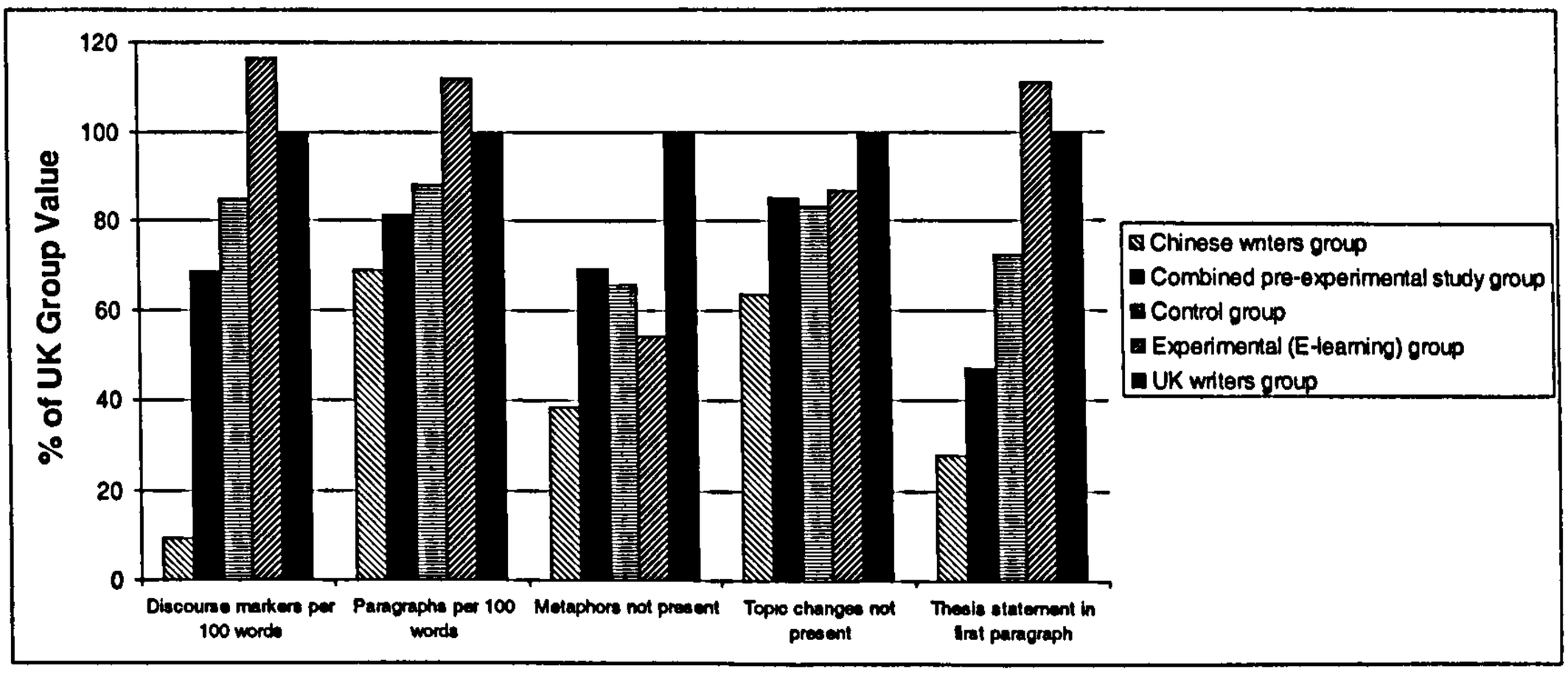
Following the experimental period, during which time the E-course group received instruction designed to promote an English rhetorical style, significant differences emerged between the control and experimental groups on three measures (number of discourse markers, number of paragraphs and position of the thesis statement). Before the experiment there was no difference in performance between the two groups on these measures. Following the E-learning intervention, on two measures (number of discourse markers, number of paragraphs), the experimental group was not only significantly different from the

control group, but also from the UK group. They had become more English than the English!

However, as expected, the E-course experience had no effect on the number of subjects who changed topics within a paragraph because they had already adopted this style prior to the experiment. Also, there was no effect on the number of subjects who used metaphors and proverbs, the groups remaining Chinese in this respect.

Overall, where change was possible, the E-course programme was effective in promoting an English rhetorical style, except in the case of the use of metaphors and proverbs. The full results of this study are summarised in Figure 8.3

Figure 8.3: SUMMARY: Comparative values on five measures of rhetorical style for the Chinese Writers Group (30 subjects), Combined Pre-Experimental Study Group (60 subjects), Control Group (30 subjects), Experimental (E-learning) Group (30 subjects) and UK Writers Group (15 subjects), expressed as percentage of UK Group scores.



CHAPTER NINE

CONCLUSION

9.1 Introduction

The purpose of the study was a) to investigate whether the theoretical aspects discussed in Chapter 3 and Chapter 4 can be used to guide the creation of learning materials in the two aspects of EFL under consideration; b) to determine the extent to which the materials can be developed within the context of multimedia as developed in Chapter 2; c) to investigate experimentally whether web-based learning programmes can be shown to help students overcome the barriers to successful interaction with a new culture, as outlined in Chapter 5.

First, a summary is required of constructivist theory and the extent to which the theory is confirmed by the experimental investigation of pedagogical approaches employed in the website that was designed to remove specific cultural barriers. This is followed by a similar analysis of the theoretical underpinning of the theory of contrastive rhetoric and the extent to which deficiencies in rhetorical style can be ameliorated by the use of supportive technologies.

Constructivist theory (see Chapter 4) views learning as being the result of mental construction: people learn by fitting new information together with what they already know, and suggests that they learn best when they actively construct their own understanding. In constructive thinking, learners are given the opportunity to

try out ideas and hypotheses and to invent their own solutions. Constructivism emphasises that it is the learners' processing of stimuli from the environment and the resulting cognitive structures that produce adaptive behaviour, rather than the stimuli themselves. Learner autonomy and initiative are encouraged. It is for these reasons that constructivism now represents the dominant paradigm in educational multimedia design and has a strong base in cognitive psychology which provides a more "liberating" view of the learner, fitting in well with the opportunities offered by multimedia technology. Constructivists believe that certain activities and environmental enrichments can enhance the meaning-making process, such as active learning using visual and auditory modalities which create opportunities for dialogue, and foster creativity by providing a rich and engaging learning environment. Duffy & Jonassen (1992) assert that today's practice of educational technology should indeed be couched in the constructivist paradigm, in terms of developing systems that are situated in the real world and are as experiential as possible. The goal is to design and present authentic learning opportunities in which individuals have the freedom and the opportunity to ground their experience in a manner appropriate to them.

This theoretical approach has been adopted by many language teachers, researchers and associations (see Chapter 5), with the American Council on the Teaching of Foreign Languages concluding that a variety of technologies that support constructivist pedagogical methods, ranging from interactive video to the World Wide Web, will help students strengthen their linguistic skills and learn about contemporary culture and everyday life in the target country. Many researchers (Crook, 1996; Herring, 1996; Kenning & Kenning, 1990; Murray,

1995), have concluded that these new technologies offer the possibility of developing the sociocultural competence of language learners more readily than the pages of a textbook or the four walls of a classroom (Kramsch 1999). This stems from two technological and social developments: (1) computer-mediated communication (CMC) and (2) globally-linked hypertext (see Chapter 2). The combination of visual and audio materials, together with hyperlinks to authentic cultural materials, which can be accessed by search engines, effectively matches the different learning styles of students. This study was designed to illuminate how students react to these different pedagogical possibilities, answering the question: do language students learn more readily from these technological innovations than from the pages of a textbook or other more traditional methods?

The experimental results for the cultural knowledge website (see Chapter 7) demonstrate that, as all groups start from the same baseline performance on the cultural knowledge test, and as the post-test scores of the students who lived and studied in the UK during the experimental period were not statistically different from the post-test scores of the students who studied cultural information from the website in China, the gains in cultural knowledge acquired through living in the UK could also be obtained by studying the website materials on a weekly basis. This is an encouraging result. Learning from the website was certainly effective, but the experimental study took this further by investigating the effects of different pedagogical methods within the website for promoting the acquisition of cultural knowledge. The first two approaches (information; reflection) related to more traditional teaching methods, the information method being simply a duplicate web version of a textbook on English culture which had

been created for the language students. Reflection required students to think about issues described in the information presentation. The remaining methods (multimedia; hyperlinks; and search) were inextricably linked to the newer technologies, which theorists had identified as being suitable vehicles for constructivist approaches. The further analysis, which was conducted to determine if those approaches that demanded more active construction of knowledge (hyperlinks, multimedia and search) and were related to constructivist theory, actually produced more learning, are best summarised in Figure 7.1, which shows that the mean gain scores on test items associated with constructivist pedagogic strategies (multimedia; hyperlinks; and search) were significantly greater when compared with mean gain scores for the control group. The results also show that for those questions that were linked to the traditional text-based method students' performance was so poor that it fell below that associated with the control group: these methods, as suggested by constructivist theory, result in little or no learning.

Jordan's (1981) survey on the writing difficulties of overseas postgraduates attending writing classes at Universities in the UK clearly illustrates the mismatch between student and staff perceptions of the problems associated with written work. Students generally underestimate their problems, with large discrepancies for style and grammar. Clearly this academic barrier leads to an escalation of cultural shock for the overseas student, especially if it is not even seen as a barrier by the students. Again, the suggestion is that the new computer-based technologies can help overcome these barriers (see Chapter 5). The advantages of using new technologies in language and culture teaching must be

interpreted in the light of the changing goals of language education. The computer is a powerful tool because it allows students access to online environments of international communication. By using new technologies in language and culture teaching, students can be better prepared for the kinds of international cross-cultural interactions which are increasingly required for success in academic, vocational, or personal life. One of the main purposes in integrating the new technology components is to expand opportunities for the students to interact directly with the language and culture. Constructivism suggests that students learn language best when they take on very active roles in engaging in and shaping their own learning processes. This is a particularly critical issue at the advanced level where there is great variation in learner needs and abilities. Appropriate use of new technologies allows for a more thorough integration of language, content, and culture than ever before and provides students with unprecedented opportunities for autonomous learning. But, do computer technologies help teachers and students to transcend linguistic, geographical, and time barriers and build bridges between native speakers and foreign language learners; and, does the use of new technologies allow students to engage in the types of online communication and research which will be essential for success in their academic and professional pursuits?

The experimental study evaluating the e-course on rhetorical style suggests that these technologies do have such an effect on student learning, particularly in terms of modifying their writing behaviour, so that profiles of their rhetorical styles change during the E-course, the experimental E-course group showing significant improvements. Figure 8.1 shows the statistically significant

differences between the Chinese group writing in Chinese and the UK writers in English on the five measures contributing to the rhetorical profile, and confirms the value of these measures in terms of identifying different cultural styles of rhetoric. The experimental group, having studied English for a number of years, are significantly different to the Chinese writers on four of the measures (the exception being position of the thesis statement), and also significantly different to the UK writers on four measures (the exception being topic changes within a paragraph). This shows that although the students have moved away from traditional Chinese style, they still have not reached an English rhetorical style, as defined by the profile measures. Clearly there is room for improvement. Figure 8.3 summarises the first- and last essay results for this aspect of the experimental study. On three of the measures the E-course group reach levels of performance similar to the UK writers, and as there were no differences at the pre-experimental stage between these groups on topic changes, the E-course group has achieved a very similar rhetorical style profile to the UK writers. The E-course, with its emphasis on computer mediated communication to build on the explicit instructions on rhetorical style presented in the webpages, has clearly fulfilled the expectations of the theoretical position on which the thesis is based. However, although the study on cultural knowledge identifies particular constructivist strategies as being effective, the study on cultural rhetoric does not clarify the issue of the relative effectiveness of the particular strategies: the results show that although both explicit instruction in the form of model essays, and opportunities to discuss written styles with native speakers, result in significant learning gains, the contribution of each approach was not measured. It is, therefore, not possible to conclude which of the two components is

responsible for the gains, or the extent to which there is synergy resulting from a combination of both methods.

9.2 Student Questionnaire

For the purpose of obtaining supportive evidence for the experimental evaluations from students' perceptions about the website and the E-course for language and culture learning, a two-part questionnaire was administered to the experimental group who had just completed the multimedia treatment in the last week of the second semester of the academic year 2001-2002. The questionnaire contained ten questions, the first eight questions were in the form of four multiple choices from which the subjects were to choose just one and the last two questions were two open questions for students to express their own opinions and judgement (see Appendix IV).

The questionnaire was constructed to (1) elicit students' perceptions about the advantages and disadvantages of using the multimedia in EFL learning process; (2) to determine whether the subjects benefited or not from the website and the E-course, which were designed for practical and academic purposes respectively; and (3) to gather some ideas related to the issue of how to improve the website and the E-course. The respondents were given enough time to answer the questionnaire and 100% of the students completed the questionnaire.

In response to Q1 [From which of the following do you think you have benefited most on the website for cultural awareness?] the students show a preference that

parallels the results in Figure 7.1: 24% students regarded multimedia as beneficial, searching (27%), hyperlink (37%); the information materials provided on the website were rated as benefiting only 13% of students. Most students identified hyperlinks as the most beneficial, which accords with the statistical results on the learning test.

Question 2 [What are the effects of hyperlink on the web in raising cultural awareness?] was asked to gain a deeper understanding of how hyperlinks functioned on the web in raising cultural awareness, and a majority of students indicated that they found the navigation paths to be useful. This may represent a preference for guided discovery in constructivist terms. Some students said that with hyperlink, they seemed to have an aim or purpose and knew where to go. More importantly, they still had choices to make. This illustrates that overall, knowledge construction and constructing an awareness of cultural knowledge is an important feature.

Attitudes towards the use of search engines [Q3: What are the effects of the search engines on the web in raising cultural awareness?] showed that the majority of students (87%) realised that they offered access to a vast resource base. Interviews with the subjects revealed that with a search engine, they could find sufficient information about what they wanted to know quickly. The findings from both the response to the questionnaire and interview indicated that most of them recognized that the use of search engine offered them a unique opportunity for finding useful and relevant information on their own. This is again reflected in the superior results from the cultural knowledge test.

When asked about the type of information that students found most useful [Which of the following modes is/are most effective in acquiring cultural information?] 87% of the students reported that they benefited from the combination of text with pictures or graphs. Few preferred text only, again supporting the experimental results that multimedia approaches are encouraging and providing opportunities for enhanced learning.

In terms of the materials on the web in [Q5: How do you evaluate the materials provided in this web?], 63.33% students believed that the materials were not really sufficient. However much was provided, it was not comparable with those they could find by search or hyperlink. This suggests a change in the way students are viewing learning materials: they may no longer be satisfied with limited access to materials that have been written by course tutors once they realise that more interesting and stimulating authentic materials are available on the internet.

As for the model essays provided within the E-course [Q6: What do you think of the publication of the contrastive rhetoric analysis results and model essays on the web?], 50% of the students enjoyed the flexibility of reading native English speakers' model essays to meet their individual needs, and many (27%) appreciated the marked rhetorical features in the E-course. A large majority (90%) indicated that the interactivity, a key feature of constructivist environments that encourage students to be active in their learning, was the highest rated feature [Q 7: How do you evaluate the E-course?]. The social dimension of constructivist learning was also rated highly by the students, with

80% of the students stated that they would have liked more frequent online communication with native English speakers [Q 8: What do you think of the online communication with the native English speakers?]. Almost all the students valued highly the E-course and the online communication. Subjects gained benefits from interacting meaningfully with native English speakers via the Internet, in particular. In the new environment, each individual was able to play the dual role of participant and provider. Importantly, each individual had an equal role to play in the English speaking culture. Consequently, constructive English learning and deep-level cultural understanding arose from conversations, discussions and debates among students and teachers. Simultaneously language and culture learning took place in a meaningful context, which is reflected in the improvements in the analysis of features of rhetorical style.

Q9 and Q10 are two open-ended questions, which were designed to elicit data for further exploration. The comments received can be placed in the categories, summarised below:

- Overall, the website and the E-course were seen as robust and constructive;
- Hyperlink, search and multimedia were more helpful than other pedagogical approaches;
- To varying degrees, the resources on the web were beneficial;
- More English resources were needed on the web to establish an EFL autonomous learning environment;
- More online communication was needed to facilitate knowledge construction and cross-culture communication.

The data from the questionnaire support the overall findings reported in the previous section (Chapter 8.2). As shown, the website and the E-course were basically conducive to overseas students' language and culture learning, if carefully designed and implemented. At the same time, some problems were identified: insufficient information on the website and fewer opportunities for online communication with native English speakers. When asked what resources they needed, many students expressed the wish to have more frequent and more personalised exchanges with native English speakers online. This indicated that online English resources pose a challenging task to EFL teachers in the years ahead.

The evidence from the questionnaire was not conclusive but tends to suggest that the website and the E-course used in this study were favourably received by the students, particularly the hyperlink and online communication. The students were found to have positive attitudes toward the online interactive activities. It was recognized that the web-based multimedia learning environment was in fact effective when used as a supplement to classroom instruction.

To sum up, subjects in this study regarded the website and the E-course as useful for practical and academic purposes. More interactive activities online should be involved in EFL teaching and learning process for knowledge construction and cross-cultural communication.

9.3 Limitations

Before the chapter proceeds with the conclusion, it is necessary to highlight some of the limitations of the study.

One limitation is the imbalance of online communication. There are always more Chinese students wishing to communicate with native English speakers while fewer English students to deal with more Chinese counterparts. If more native English speakers could have been involved, the online interactive communication would have been more productive. As social constructivism suggested (Vygotsky 1978), learning takes place in interaction.

Furthermore, if a set of criteria for essay assessment had been developed, more quantitative data would have been obtained and more dimensions regarding rhetoric features of the essays produced by overseas students and native English speakers alike could have been studied. Some can be done by computer but criteria need justification.

The author recognised the difficulty of collecting contrastive data from cultures as different as China and the UK. Certainly data from naturalistic settings need to be collected to fully understand the cultural difference, particularly rhetorical difference between Chinese and English. It is also recognised that more interviews of overseas students are needed to account for their ways of English writing, which might shed some light on Chinese students' reasons for using more metaphors and native English speakers' reasons for using fewer metaphors.

This might open a new window on the perceptions and performances of overseas students in terms of the study of contrastive rhetoric.

As for the English academic writing, the further research focus could be more on content than on form. For example, counter-arguments, interpretive disagreements, and alternate analyses which account for the conclusions.

Typically, an academic writer is faced with demonstrating the interrelatedness of others' ideas and texts in the developing context of his/her own writing. To help achieve this intertextuality, students need to be trained to depend upon the on-line indexing, and retrieval systems to help them discover sets of texts that can be related to one another in interesting and effective ways. Students have to be aware of the responsibility one assumes when engaged in the process of persuading others and the possible ways in which one's own writing may be read, put to use, and appreciated by others.

Although the E-course does change the rhetorical style of the Chinese students, there is still uncertainty as to which of the components is mainly responsible for the change. It is possible, for example, that the improvement is due mainly to the additional study time that is available to the experimental group. This issue could be resolved by providing additional textual material for study by a further experimental group that did not have access to the E-course. However, the goal set up at the outset of the research has been primarily achieved and the findings in this research can be used as a stepping stone for future exploration in this field.

9.4 Recommendations

For pedagogical and research purposes, this study provided some useful indications for further research regarding the effects of multimedia on language and culture learning.

Further research can be done with the consideration of the factors below:

First, in-depth study of resources:

The issue of supplemental curriculum resources in the teaching of English is a significant one, as constructivism emphases learners' control of learning processes (Huang 2002:34). Access to resources to supplement an English program would be easy in the UK, however, such is not the case in China's university settings. It is not uncommon for many students to use English textbooks compiled in the 1960s or in the 1980s there. Therefore the subjects in this study displayed great enthusiasm for the multimedia which provided them with access to new real-world resources. This enthusiasm was particularly apparent for Chinese subjects who are expecting to participate in international communication with native English speakers.

The Chinese students expressed a desire to make use of multimedia to facilitate a resource-based learning environment. A resource-based learning environment involves active interaction with resources such as books, journals, newspapers, multi-media, and a virtual community where students are motivated to learn about a topic by trying to find information related in as many ways and places as

possible. Resource-based learning appeals to overseas students' interests. Some students said they studied, entertained themselves and lived on the internet but they worked with a large quantity of resources online in Chinese. This suggests that students with easy access to resources need proper guidance. The fact that hyperlink was better received than random search in this study illustrated this point because the former provided this kind of guidance.

Not only did students express a strong desire for online resources but also they appreciated that these English materials were authentic. The reason is that authentic materials helped students to handle the complex reality of a foreign language and culture. Smith (1999) described use of such materials as providing a "bridge between the classroom and the world". More pointedly, they facilitate students to transform information into valuable knowledge (Catherine 1999), thus, supporting knowledge construction. The importance of the use of authentic materials should never be underestimated, as authentic materials appeal to a wide range of students' needs and interests. This convinced us that in-depth study of online resources is valuable in their English learning process.

Second, online communication

As discussed in Chapter 4, learning involves two kinds of interaction: the internal psychological interaction between new and existing knowledge (Piaget 1973), and the external social interaction by which new knowledge is mediated and learners can negotiate their way towards new meanings (Vygosky 1978). For social constructivists, learning should involve interaction with other people or environments, which foster potential development and reflective response

(Jonassen 2000). In this study, the subjects are clearly interested in communicating with peers in different cultures.

As can be seen, overseas students gained benefits from on-line communication. The Internet offers opportunities for interactivity, especially with students from other cultures, which results in increased cultural awareness. In searching for and retrieving information from the Internet, students have greater interaction with the target culture.

This is especially important for students learning English as a foreign language, as their exposure to natural language might lead to a better understanding of the new culture. Nurtured in the English culture, overseas students could gradually develop their critical thinking and thus be empowered to express themselves.

As intercultural communication online increases, overseas students are supposed to develop different skills by communicating with peers worldwide via the internet. For the purpose of language and culture learning, overseas students' communication on the internet should be further investigated.

Third, Autonomous learning

Closely related to this study is autonomous learning. In recent years, the theory and practice of autonomy has developed (Gardner and Miller 1999, Sinclair, et al, 2000), and autonomy is associated with several means of implementation. One of the most discussed is self-access, which generally involves setting up some kind of resource centre in which language learners can work freely. Doubtless,

autonomy provides the opportunities for language learners to explore a rich variety of language resources under their own direction. Through interaction with a self-access system, learners can make sense of self-directed language learning and develop towards greater autonomy.

It should be recognised that networking fosters autonomy, equality and learning skills among students. Collis (2002) argued that the Internet could have a direct effect on the way we teach our students, especially if our goal is to prepare them for life outside the classroom. It follows that autonomous learning sees students as life-long learners, promotes student-directed/student-centred learning, emphases process rather than product, and develops cross-cultural insights and strategies for effective communication with people of different cultural backgrounds (William and Burden 2000). In this way, overseas students' language competence and cultural awareness would be more fully developed.

Fourth, contrastive rhetoric study

This study reveals that learning to write in a foreign language is much more than just a technical achievement in orthography, vocabulary and syntax. Becoming a proficient writer in a foreign language requires assimilation of far more subtle and pervasive cultural knowledge such as rhetoric.

Because Western rhetorical skills are the products of particular cultural assumptions and values, cultural specific writing patterns need to be acquired through a gradual process. As such, students could be asked to observe, then identify some rhetorical features in spoken or written discourses. For example,

deixis, directives and the like should be highlighted. Through a gradual process, overseas students could have a better understanding of English rhetoric and produce English discourses accordingly. In this context, we could accept the position that cultural difference needs to be explicitly taught in order to acculturate EFL writers to the target discourse community (Connor 2002). In brief, more exposure to different genres would be necessary and beneficial to overseas students' awareness in communication across cultures.

9.5 Conclusion

Based on constructivist theory, this study explored the learning of language and culture for practical and academic purposes via the website, investigated the potential impact of multimedia on language and culture learning and explored the possibility of creating an interactive learning environment via multimedia to raise overseas students' cultural awareness. As can be seen, this empirical study is complex in nature: complicated statistical techniques were employed for cross-comparison within groups and between groups for the five approaches and Chinese students' essays in Chinese, Chinese students' essays in English (before and after the experiment) for the five rhetoric aspects, and native English speakers' essays. As this research suggests, the perception and practice of overseas students involved in the website and the E-course learning activities are positive and they should be given more exposure to the target culture and be given more chances to communicate with the native speakers, to exchange ideas, and to keep in contact electronically, if possible.

As becomes obvious, multimedia is an effective way to create an interactive learning environment where language and culture learning take place. In a language learning setting where students are studying the foreign language outside the target culture, creating opportunities for exposure to the target culture is an important strategy for making connections between what they learn in classroom and how it is used in a real-life context. Although culture is not merely different transport, accommodation and some other readily observable phenomena, these nonetheless present practical problems to students from other cultures and affect their perception of the target language and culture. To solve these practical problems, multimedia could be used for constructing meaningful knowledge in the new culture. As a result, they could learn to adjust to the foreign culture, learn to understand it from its own perspectives and eventually become competent cross-cultural communicators.

This research indicates that web-based multimedia with abundant resources not only facilitates language and culture learning but also helps students to become autonomous and life-long learners. With the help of well-designed multimedia (e.g. website and E-course), students could be encouraged to become autonomous and life-long learners. Overseas students should be provided with real problem-solving opportunities so as to better prepare themselves for real-world situations.

The findings can be used as a baseline for further research related to the EFL teaching and learning in higher education institutions in China. It should be recognized that the website and the E-course are used as a supplement rather than

substitute for the conventional classroom activities. Nevertheless, the results are sufficiently clear with small groups to make further larger-scale research justifiable.

What we have done in this research is a step further in the direction of helping our students to become competent cross-cultural communicators who will take the initiative to explore and construct in the EFL learning process. They will no longer just rely on their textbooks and teachers but rather with the help of multimedia, they can take a more active role in acquiring the target language and culture. They will be ready for continuous self-learning, thinking and exploring in a life-long process. Hopefully, they will be competent and confident cross-cultural communicators in this interrelated world.

Given the nature of the education system in China, it is believed that the findings of this study would similarly be applicable to other higher education institutions in China. This is because a standard system is in operation throughout China. Universities accept students within the same narrow age range and subject to the same academic achievement criteria.

It is hoped that this study, by the comprehensiveness of its approach and the novelty of its application of E-learning in a China's university setting, has identified some problems crucial to the advancement of the web-based teaching and research in China, meanwhile contributed to better understanding of the theory and practice of constructivism, and will encourage further such efforts worldwide.

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Appendix I

Sample Essay

Present a written argument or case to an educated reader with no specialist knowledge of the following topic.

Fatherhood ought to be emphasized as much as motherhood. The idea that women are solely responsible for deciding whether or not to have babies leads on to the idea that they are also responsible for bringing the children up.

Bring out the thesis statement to be discussed and your opinion about the issue.

In some societies, it has been made easier over the years for single parents to raise children on their own. However, this does not mean that the traditional family with both parents providing emotional support and role-models for their children, is not the most satisfactory way of bringing up children.

Of crucial importance, in my opinion, is how we define 'responsible for bringing the children up'. At its simplest, it could mean giving the financial support necessary to provide a home, food and clothes and making sure the child is safe and receives an adequate education. This would be the basic definition.

There is, however, another possible way of defining that part of the quotation. That would say it is not just the father's responsibility to provide the basics for his children, while his wife involves herself in the everyday activity of bringing them up. Rather, he should share those daily duties, spend as much time as his job allows with his children, pay with them, read to them, help directly with their education, participate very fully in their lives and encourage them to share his.

It is this second, fuller, concept of 'fatherhood' that I am in favour of, although I also realise how difficult it is to achieve sometimes. The economic and employment situation in many countries means that jobs are getting more, not less, stressful, requiring long hours and perhaps long journeys to work as well. Therefore it may remain for many a desirable ideal rather than an achievable reality.

I believe that child-rearing should be the responsibility of both parents and that, whilst the roles within that partnership may be different, they are nevertheless equal in importance.

Appendix II

Homepage Contents

<u>Unit 1. Transport</u>: taxi, bus, underground, railway, coach

Aims: -- know how the taxi system works
-- know how to get on and off the bus
-- know how to change lines in the underground
-- use coach as an alternative
Time: 60 m
Delivery: WWW (with a map of subway in the web)
Assessment: find the way from Heathrow to Salford University by whichever means of transport with the help of the maps in the web

<u>Unit 2. Registration</u>: police station, opening bank account, university registration

Aims: -- learn to register at the police station
-- open an account at the bank
-- register at the university
-- understand the marking scheme for modules
Time: 30 m
Delivery: WWW (with a table of money changing rate page linked)
Assessment: fill in a registration form, a saving account form, and a form for modules

<u>Unit 3. Accommodation</u>: houses in general, student lodging, private house, sharing house

Aims: -- have a general idea of different lodgings
-- know how university accommodation works
-- know what to do before signing the contract
Time: 30 m
Delivery: video and WWW
Assessment: find accommodation for yourself and explain your choice

Unit 4. In-class activities: participation, pair/group work, seminar

Aims: -- know how to involve yourself in class activities
-- know how to contribute to pair/group work
-- learn to learn
Time: 60 m
Delivery: WWW
Assessment: make a presentation in a seminar on the topic of your own research area, with the preparation of pair/group work

Unit 5 After-class activities: church, pub, museum, music, sports, tourism

Aims: -- have a general idea of what churches are like in the West
-- reduce the bias and prejudices about pubs
-- have a general idea of tourism in the UK
Time: 60 m
Delivery: video + WWW
Assessment: reading comprehension and a commentary writing on church, pub (150 -- 200 w).

Unit 6. Holidays: Christmas, Easter, Term-breaks

Aims: -- know the different concepts of holiday
-- have a general idea of Christmas, Easters
-- know when the term-breaks take place and how long they last
Time: 30 m
Delivery: WWW (with 6 still pictures in the web)
Assessment: write a plan for a holiday in the west with 300-400 words

Unit 7. Assignment/dissertation: literature, analysis, critics, marks

Aims: -- know the Western writing pattern and style
-- know how to critically analysis the existing literature and new data
-- know how to apply the findings to practice
-- know how to use references
Time: 60 m
Delivery: WWW (with sample assignments attached)
Assessment: write an assignment on the topic of your own area (500-800 w)

Unit 8. Graduation: separate ceremonies, senior graduates, dressing

Aims: -- know what the graduation ceremony is like in the West
-- know the criteria for graduates with distinctions
-- sense of life-long learning
-- celebration
Time: 30 m
Delivery: WWW (with two still pictures on the web)
Assessment: summarise your study life in the UK and tell us how you are going to celebrate your graduation

Unit 9. Application: source of information, application form, CV, covering letter

Aims: -- know where to find the vacancy information
-- know how to fill in the application form
-- know how to write a CV
-- know how to write a covering letter
Time: 30 m
Delivery: WWW (with on-line application form, sample CV, covering letter linked in the web)
Assessment: submit an application form, or a CV together with a covering letter

Unit 10. Interview: preparation, presentation, on-the-spot answers

Aims: -- know how to prepare for an interview
-- know how to present yourself in an interview
Time: 60 m
Delivery: WWW (with a list of possible questions frequently asked during an interview)
Assessment: an actual oral interview (with a teacher of English and a supposed employer as examiners)

Unit One

Transport

The first thing for you to do after you have arrived in the UK is to find transportation to take you to your university. You may see many forms of transportation, yet they are not as easily accessed as you imagine, unless you know how.

Taxi

The most convenient way for you to get to your university, if it is not very far from the airport, could be taking a taxi. There are two kinds of taxi which are frequently used in the UK: The Black cab and The Minicab.

The black cab, which can occasionally seen in films in China, is one of the UK's most endearing symbols for a taxi. These cabs can be accessed near the Exit of the airports. Contrary to the taxis in China that are small, these black cabs are so big that they can accommodate as many as four or five passengers. If you have friends or classmates coming together, you can share the taxi fare. The fares are monitored on a clearly visible meter in the front of the cab. Arriving at your destination, the driver might help with your luggage. In addition to the fare, you'd better give the driver a tip to express your appreciation of the driver's help, although it is not obligatory.

Another kind of taxi called a minicab is cheaper than the black cab. However, you cannot expect minicabs to be waiting for you in a queue at the Exit of airports. You cannot hail them in the street either. To use minicab, you need to phone the company's offices to book. Check the phonebook for taxi numbers, choose one, phone the company to order a taxi and one will be sent to the airport to pick you up and take you right to your destination. Minicabs are usually cheaper than black cabs but you might have to wait some time for one to arrive.

Bus

On arriving at a big city in the UK such as London, what catches your eye first might be the red, double-deck buses because this kind of bus is seldom seen in China. Taking a bus is obviously cheaper than a taxi, but you must explore first which bus to take, where to get on and where to get off. You can get the information from the free maps and timetables at bus/train stations or Tourist Information Agencies.

While waiting at the bus station, seeing your bus coming, you have to stretch out your arm to signal the bus to stop, because several buses on several routes stop at the same bus stop. If you do not signal, the bus driver might reckon that you are waiting for a bus on another route.

After you get on the bus, you'd better not to sit in the first two rows because they are normally for senior citizens or pregnant women or disabled passengers. You might want to go to the upper deck to have a better view of the streets.

Before you get off the bus, you must also signal the driver by ringing the bell that is fixed on a pole near your seat. When the driver hears the bell, he/she will stop the bus at the next bus stop for you.

Underground

To a complete stranger, the map of the underground in London is a complex web of brightly-coloured lines spread over different travel zones.

LONDON

http://www.afn.org/~alplatt/tube.html

The red line in the middle is the central line stretching from the west to the east. In parallel, the green line below is the district line. Above these two lines, although not very straight, is the brown line (also running from the west to the east). Connecting with these three lines is a blue line and a grey line running from the south to the north. Across these west-east and south-north lines are interchange stations symbolised as ⬭⬭.

Seeing these symbols, you know that at these stations you can change lines. The cost of your ticket is not determined by how long you travel on the same line but by how many zones you cross. Pick up a free map of the routes from any station,

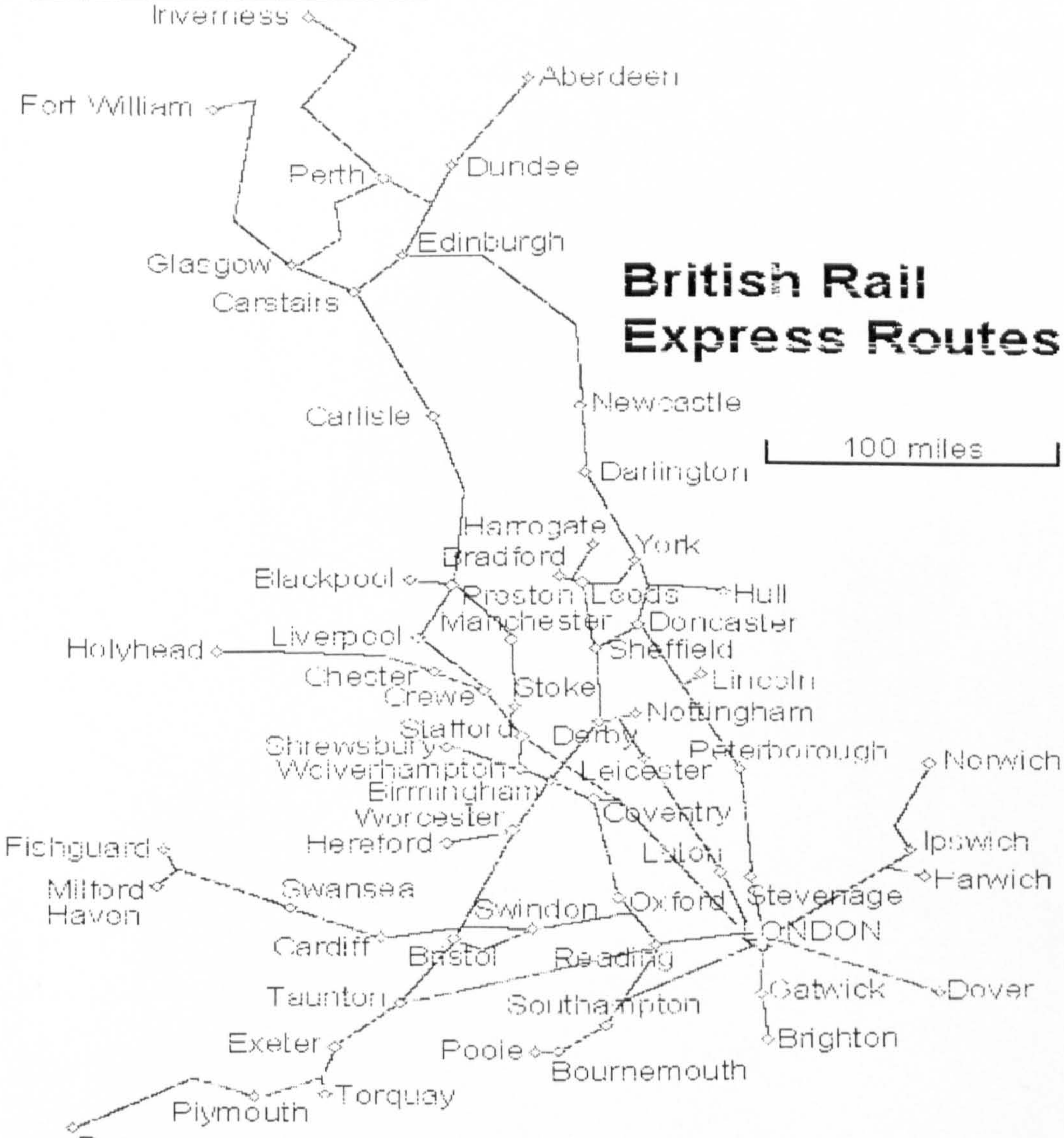
study the coloured lines and find out which is the quickest way to your destination. Once you have got into the carriage, you can see these coloured-line maps on the walls of both sides of the carriage. Check your destination station name on these maps with that on the walls of the platform and you will find the right station to get off.

Railway

If your university is located in another city, you'd better use the railway. Main line railways run throughout the UK. Many underground routes interchange with rail lines. As soon as you see the symbol of ⇄

you should realise that you can get to the railway from this underground station.

http://www.cpoint.co.uk/tw/uk/rail.html



On this railway map, the *bold type* are main railways and *light type* are connecting trains. If you have to change trains, you need to have a look at the announcements on television screens hanging on the platforms. Check the a—arrival time, d—departure time, where from and where to information from the screen. Before you get on the train, you may ask the conductor (normally at the head of the train) to make sure if you are getting on the right train, and before you get off, you may ask the passengers nearby. British people are normally very kind and they will tell you when to get off.

Coach

An alternative to the train is a coach: this is often the cheapest method of long-distance travel. *National Express*, as well as other coach services, offers extensive trips all over the UK. Go to the coach station for information on departures, timetables and tickets. Under the age of 25, you may buy a £8 annual discount card so that wherever you go by coach within a year, you may have up to 1/3 discount. Since it covers long distance, food and drink are served in the coach. Bear in mind that it takes longer to get to your destination by coach. Also those who suffer from travel-sickness are advised to take the train.

1. **http://www.nationalexpress.co.uk/**
2. http://www.nationalexpress.co.uk/?w=800
3. http://www.pti.org.uk/

Bike

Coming from the "Kingdom of bicycles", you might want to cycle after you have settled in your university. Be aware that you are not allowed to ride your bicycle on the pavement. There is a lane for bicycle on each side of the street, although narrower than that in China. Also on the street in the UK, people drive on the left. You have to learn to look first to your left and then to your right. If you want to cross the road, you should press the button fixed on a pole at the crossing, (although this may seem to be strange to you at first). The traffic light will turn red to stop the traffic and a green sign of a person walking shows you that you can cross the street safely. When the green sign comes on, there is also a sound accompanying it. Do you know why? The sound system is provided for the blind who cannot see the traffic lights. The government is very considerate to the disabled in this country.

A concrete example at this stage might be useful to get you familiar with the UK transportation. Suppose, you have arrived at Heathrow Airport in London and wish to catch a train to Salford, you can:

1. Follow the signs to the underground (metro/subway) and take the Piccadilly Line--eastbound (shown in dark blue on the underground map) to Euston Station. The journey takes approximately one hour and currently costs £3.40.

2. Follow the signs to the Heathrow Express train, which is the new and non-stop rail link between Heathrow and Paddington Station. Trains leave every 15 minutes and the journey lasts 15 minutes. Fares are £12 each way for Express Class and £33 each way for First Class. Arriving at Paddington, you need to take the underground to Euston, the centre of London.

3. Take the AirBus from Heathrow to the centre of London. This is a regular and reliable bus service. Follow the signs to the central bus station from Heathrow Terminals. Airbus 2 leaves for Euston British Rail Station every 30 minutes from 6:30 a.m. to 10:30 p.m. and takes about 50~90 minutes. The current fare is £7 for a single and £11.6 for a return ticket.

Once you have arrived at Euston Station, trains depart for Manchester almost every hour. The journey takes about 2 hours and 45 minutes and the cost of a single fare varies from £15 to £150 according to time and season. It can save you some money if you buy a Young Person's Railcard at the Railway Station before buying your train ticket. The card currently costs £18 and you will need to show your passport, two passport sized photographs. The card provides a one third reduction on all rail tickets and is valid for 12 months.

An alternative to travel from London to Manchester is by *National Express* coach. Coaches leave from Victoria Coach Station (near Victoria Railway Station) and the journey takes approximately 5 hours. You can reach Victoria Station from Heathrow by taking the underground Piccadilly line (dark blue) to South Kensington. You will have to change trains and lines at South Kensington, so follow the signs for the Circle line (yellow) to Victoria Station. Coach cards work in the same way as railcards except they are for use on *National Express* coaches only. The current cost is £8 (for a yearly card) or £19 (for a three year card).

Activity 1:
Compare the taxi system with that in China and tell the similarities and difference.
Compare the bus system with that in China and tell the similarities and difference.
Compare the train system with that in China and tell the similarities and difference.
Compare the subway system in London with that in Beijing and tell the similarities and differences.
Compare the flight system with that in China and tell the similarities and difference.

Activity 2:
Go to YAHOO, and type in the key words like taxi, British taxi, taxi UK, cab, city cab and see which is the quickest way to find out how the taxi system works if you want to go to some places in the UK.

Activity 3:
Go to any other search engine such as Alta Vista, Google, Ask Jeeves, Excite, Netscape Search, and HotBot, and type in any key words your like to find out how the taxi system work if you want to go to some places in the UK.

Exercise 1:
Now you have arrived at Heathrow Airport. How can you get to Salford University? (You can try the key words of Heathrow, Salford or Heathrow, Manchester with any search engine you are familiar with).

Suggested answers:

By air
Take a flight from Heathrow to Manchester International Airport. Then take a train which stops at SALFORD CRESCENT Station.

By train
1. Take a train from London's Euston Station to MANCHESTER PICCADILLY
2. Take a connecting train from MANCHESTER PICCADILLY (platform 13-14) to SALFORD CRESCENT.
3. Purchase a ticket from London Euston to SALFORD CRESCENT via MANCHESTER PICCADILLY.

SALFORD CRESCENT Station is just on the University's Campus. You may ask for the main reception point in the MAXWELL Building, Welcome desk or go straight to The Department, which gives you the offer.

By coach
Go to the coach station near the airport. Take a coach departing for Manchester. Coaches arrive in MANCHESTER at Chorlton Street. Then take a bus or train to SALFORD CRESCENT Station, where you are already on the campus.

Exercise 2 : Now you have arrived at Heathrow Airport. How can you get to Manchester University? You may consult this website:
http://www.concierge.com/travel/c_planning/06_airports/eur/londonhrw.html

Exercise 3: Now you have arrived at Heathrow Airport. How can you get to Hull University? You may consult this website:
http://www.concierge.com/travel/c_planning/06_airports/eur/londonhrw.html

Exercise 4 : Now you have arrived at one of London's airports. How can you get to London University? You may consult this website:
http://www.baa.co.uk/BAAHome.htm

Exercise 5 : Find the cheapest way from Victoria, London to Leeds University

Exercise 6 : How to get to Circus from Euston by subway? How many lines do you have to change and what are they?

Suggested topics for discussion

1. If the cost of the taxi is more than you expected and when you get to your destination, you find that you don't have enough money to pay the taxi driver, what should you do?

2. One early Sunday morning, you are waiting at a bus stop. Buses are very few and far between. Occasionally there are one or two buses coming by, but they continue moving ahead. You have been neglected for an hour and a half and there is no one around the bus stop that you can ask. What are you doing wrong?

3. You have just come from China with heavy luggage and a £50 note in your pocket. You are confused by the coloured lines of the London underground map and you are lost at the platform. You have no idea of how to get to Manchester, what should you do?

4. Immediately after you get on the train, it starts moving. Ten minutes later, you suddenly realise that the train is travelling in the wrong direction. Obviously you have got on the wrong train, what should you do?

5. You have to spend three and a half hour in a coach. What are you going to do? Have a chat with the native speaker next to you? Enjoy yourself by looking out through the window? Do some light reading or serious thinking or have a nap and day dream?

6. When you are cycling on the pavement one evening, you are stopped by the police. Do you agree to pay a fine straight away, or do you argue with the police saying that there is nobody on the pavement anyway and it is safer than to ride on the street. Do you pretend that you didn't know the rules and promise not to do it again?

Appendix III

Pre-test 1 for Practical Cultural Awareness in the UK

Choose the answer you thin the most appropriate from the four possible choices.

Transport

1. What is the advantage of a minicab over a black cab?
a. it is cheaper
b. it is smaller
c. it is faster
d. it is prettier

2. What is the advantage of a black cab over a minicab?
a. it waits outside the main railway stations
b. it takes less time to for a black cab to come
c. it is easier to catch one on the street
d. it comes to your home to pick you up

3. If you are going from Heathrow Terminal 3 to Oxford Circus by underground, which route is the quickest?

a. blue -- green -- red	Piccadilly -- District -- Central
b. blue -- green -- blue	Piccadilly -- District -- Victoria
c. blue -- green -- brown	Piccadilly -- District -- Northern
d. blue -- grey -- red	Piccadilly -- Jubilee -- Central

4. Which is the cheapest way to get to Edinburgh from London?
a. car b. coach c. train d. flight

Registration

5. What must be done within seven days after you arrive in the UK?
a. Police registration
b. University registration
c. Hospital registration
d. Club membership registration

6. What do you need to open a student bank account?
a. money, proof of current address and passport
b. offer letter, proof of current address and proof of permanent address
c. proof of university place, passport and proof of address
d. current address, proof of permanent address and money

7. How do you make use of the local health service?
a. register with a doctor
b. register with a hospital
c. register with the Council welfare service

d. register with your university hospital

8. Which of the following is a first class honours mark in university modules out of 100%?

a. 60% b. 70% c. 80% d. 90%

Accommodation

9. What is the most sensible way for you to manage the first one or two nights after you arrive in the university before you find your own accommodation?

a. stay at the railway station
b. sit on the chair at the reception desk of the university
c. appeal to the university's emergency accommodation
d. look for a cheap Bed & Breakfast Hotel

10. Which of the following is the cheapest place to live?

a. a detached house in a village
b. a student hall of residence
c. a shared house on/near the campus
d. a local family house

11. In university accommodation for postgraduates, how many students are there usually in one flat (separate bedrooms but sharing a bathroom and a kitchen)?

a. 2 b. 4 c. 6 d. 8

12. What is the most important thing to do before you sign the accommodation contract?

a. make sure that you have got enough money for a year
b. make sure that you agree with every item in the contract
c. make sure that you can keep in contact with your family
d. make sure that the accommodation is near a police station

Expectation

13. What do you expect your teacher to be like?

a. Role model, expert and parent
b. Master, guide and friend
c. Authority, role model and parent
d. Expert, facilitator and friend

14. A classmate of yours is going to make a presentation in a seminar: what is your reaction?

a. this student may not be able to offer as much as the teacher in a lecture
b. if this student can do a good job, you might also be able to give your presentation well
c. take advantage of this opportunity to exchange ideas with your classmates
d. what a waste of precious class time

15. You are in a discussion group. Everybody else's English is better than yours. What should you do in this group discussion?
a. offer as much as you can with your limited English
b. keep quiet for the time being until you are competent enough
c. observe what other students are doing in the group and learn from it
d. absorb the brilliant language they have used as best as you can

16. Which of the following is the least important aim of a group discussion?
a. to create harmony in the group
b. to promote critical thinking
c. to extend studies beyond those covered in lectures
d. to widen and broaden the topic

Communication and socialisation

17. Where do people go on Sunday mornings if they want to meet and express their beliefs?
a. church b. museum c. concert d. sports centre

18. Where do you usually meet your friends over the weekend?
a. pub b. park c. seaside d. home

19. What is the most popular sport in the UK?
a. horse-racing b. sport car – racing
c. football d. cricket

20. Which of the following is not an appropriate occasion for students to socialise and make friends?
a. barbecue
b. hiking
c. casino
d. University Open-day

Holidays and tourism

21. In which season does Easter occur?
a. spring b. summer c. autumn d. winter

22. How long does Christmas term break last in the university?
a. one week b. two weeks c. three weeks d. four weeks

23. Which of the following is not in London?
a. Cathedral of St. John the Divine b. Hyde Park
c. Tower Bridge d. Westminster Abbey

24. Which of the following is the largest medieval church north of the Alps, famous for its wealth of stained glass?
a. York Minster b. Westminster c. Whitehall d. St Paul's Church

Graduation and employment

25. What will you wear at the graduation ceremony for your PhD degree?
a. Western-style suit and a tie
b. black-white robe with a square-shaped hat
c. a coloured hood with a round-shaped hat
d. a long black and white robe

26. At the graduation ceremony, who can have a chance to shake hands with the Chancellor of the university?
a. those who are wearing national costume
b. those who have just got their degrees
c. those who have gained the chance to do higher degrees
d. those who have been selected to study abroad

27. If you want to find an academic job, what is the most efficient way to get information about the job opportunities?
a. journal and periodical
b. bulletin and the Internet
c. newspaper and poster
d. the Internet and local newspaper

28. What letter do you submit together with your application for the job?
a. opening letter
b. covering letter
c. closing letter
d. application letter

29. What is the most important thing to do before your job interview?
a. study the job description carefully
b. wear smart clothes
c. investigate the background and personality of the interviewers
d. get some information from the friends or relatives about the interviewers and their interests

30. At the end of the interview for an academic job, you are asked if you have any questions, what do you do?
a. say "no" to show that you have understood everything and quickly end the interview
b. say "yes" and ask some realistic questions about the financial package
c. ask some questions about the interviewers' institution to show your knowledge and interest
d. elaborate on what has been talked about

Appendix IV

Questionnaire on the Course in Cultural Awareness

Q1. From which of the following do you think you have benefited most on the Website for cultural awareness?

a. Multimedia
b. Searching the Web
c. Hyperlink
d. The materials provided in the website

Q2. What are the effects of hyperlink on the web in raising cultural awareness?

a. They provide good navigation paths for information.
b. They narrow down the scope in searching for information.
c. They provide a foundation for conducting web searches for additional information.
d. They restrict the results of the search.

Q3. What are the effects of the search engines on the web in raising cultural awareness?

a. They provide access to a vast resource base.
b. They provide access to all the useful information needed to develop cultural awareness.
c. They are too time-consuming to use when attempting to access cultural information.
d. They do not provide adequate information to help develop cultural awareness.

Q4. Which of the following modes is/are most effective in acquiring cultural information?

a. text only
b. text + pictures
c. text + charts/graphs
d. text + sound

Q5. How do you evaluate the materials provided in this Website?

a. They are too general.
b. They are just what I need.
c. They are not really sufficient.
d. They are too specific and too narrow.

Q6. What do you think of the publication of the contrastive rhetoric analysis results and model essays on the Web?

a. It is quicker and more cost-effective to get them from the web than from books or handouts.
b. It is most useful to have different colours and symbols for different rhetoric features.
c. It provides the flexibility to read more or fewer model essays than are necessary to meet my individual needs.
d. The presentation format (figures, graphs, colours) is easy to understand.

Q7. How do you evaluate the E-course?

a. It is useful in that it functions in an interactive way.
b. It is less stressful to use than work in class.
c. It is more fun to play with.
d. It is not as useful as a class with a teacher.

Q8. What do you think of the on-line communication with the native speakers?

a. It is a better method to acquire the target culture than classes.
b. It will be more beneficial if the on-line communication is more frequent.
c. It does not provide what I need.
d. It does not help a lot if the native speakers do not give specific advice.

Summary of the response for the questionnaire

Question 1	A	B	C	D
No.	7	8	11	4
%	23.33%	26.67%	36.67%	13.33%

Question 2	A	B	C	D
No.	24	4	1	1
%	80.00%	13.33%	3.33%	3.33%

Question 3	A	B	C	D
No.	26	1	2	1
%	86.67%	3.33%	6.67%	3.33%

Question 4	A	B	C	D
No.	2	16	10	2
%	6.67%	53.33%	33.33%	6.67%

Question 5	A	B	C	D
No.	2	5	19	4
%	6.67%	16.67%	63.33%	13.33%

Question 6	A	B	C	D
No.	4	8	15	3
%	13.33%	26.67%	50.00%	10.00%

Question 7	A	B	C	D
No.	27	1	1	1
%	90.00%	3.33%	3.33%	3.33%

Question 8	A	B	C	D
No.	3	24	1	2
%	10.00%	80.00%	3.33%	6.67%

APPENDIX V

CHAPTER 7 TABLES AND FIGURES

Table 7.1: ANOVA results for H_o1:

H_o1. There is NO significant difference in the pre-test scores of the three groups (Control, Experimental and UK experience) prior to the experimental period [confirmed].

ANOVA

SCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.100	2	2.050	.212	.810
Within Groups	696.567	72	9.675		
Total	700.667	74			

Table 7.2: ANOVA results for H_o2:

H_o2. There is NO statistically significant difference in the post-test scores of the three groups (Control, Experimental and UK experience) after the experimental period [rejected].

ANOVA

SCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	170.320	2	85.160	15.360	.000
Within Groups	399.200	72	5.544		
Total	569.520	74			

Table 7.3: Descriptive statistics and Bonferroni test (for multiple post-hoc analyses) for pre- and post-test results

Pre-test:

Descriptives

SCORE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
control	30	13.2667	2.94704	.53805	12.1662	14.3671	8.00	20.00
exptl	30	13.6333	3.38845	.61864	12.3681	14.8986	7.00	20.00
uk	15	13.8667	2.82506	.72943	12.3022	15.4311	9.00	18.00
Total	75	13 5333	3 07709	.35531	12 8254	14.2413	7.00	20.00

Post-test:

Descriptives

SCORE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
control	30	15.3333	2.61736	.47786	14.3560	16.3107	11.00	22.00
exptl	30	17.8000	2.36934	.43258	16.9153	18.6847	14.00	22.00
uk	15	19.1333	1.64172	.42389	18.2242	20.0425	16.00	22.00
Total	75	17.0800	2.77421	.32034	16 4417	17.7183	11 00	22.00

Bonferroni test for multiple post-hoc analyses:

Multiple Comparisons

Dependent Variable: SCORE

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
control	exptl	-2.4667*	.60797	.000	-3.9569	-.9764
	uk	-3.8000*	.74461	.000	-5.6252	-1.9748
exptl	control	2.4667*	.60797	.000	.9764	3.9569
	uk	-1.3333	.74461	.233	-3.1585	.4919
uk	control	3.8000*	.74461	.000	1.9748	5.6252
	exptl	1.3333	.74461	.233	-.4919	3.1585

*. The mean difference is significant at the .05 level.

Table 7.4: Paired samples tests for pre- and post-test results for H_o6 to H_o8

H_o6. There is NO statistically significant difference between pre- and post-test scores for the Control group [rejected].

Paired Samples Test

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 PRE - POST	-2 0667	2 19613	.40096	-2 8867	-1 2466	-5 154	29	.000

H_o7. There is NO statistically significant difference between pre- and post-test scores for the Experimental group [rejected].

Paired Samples Test

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 PRE - POST	-4 1667	1 20583	22015	-4 6169	-3 7164	-18.926	29	.000

H_o8. There is NO statistically significant difference between pre- and post-test scores for the UK experience group [rejected].

Paired Samples Test

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 PRE - POST	-5 2667	2 96327	.76511	-6 9077	-3 6257	-6 884	14	.000

Table 7.5a: Two-factor mixed ANOVA for pre-test results on 5 test items associated with different web-site pedagogic strategies (information; reflection; multimedia; hyperlinks; and search) and the 3 groups of subjects (Group: Control, Experimental, UK experience) testing H_o9:

H_o9. There is NO statistically significant difference between groups (Control, Experimental, UK experience) or pedagogic strategy (reflection; hyperlinks; information; multimedia; and search) on pre-test measures [confirmed].

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig
STRATEGY	Sphericity Assumed	16.267	4	4.067	2.229	.066
	Greenhouse-Geisser	16.267	3.235	5.029	2.229	.081
	Huynh-Feldt	16.267	3.499	4.649	2.229	.075
	Lower-bound	16.267	1.000	16.267	2.229	.140
STRATEGY * GROUP	Sphericity Assumed	12.947	8	1.618	.887	.528
	Greenhouse-Geisser	12.947	6.470	2.001	.887	.511
	Huynh-Feldt	12.947	6.998	1.850	.887	.517
	Lower-bound	12.947	2.000	6.473	.887	.416
Error(STRATEGY)	Sphericity Assumed	525.347	288	1.824		
	Greenhouse-Geisser	525.347	232.912	2.256		
	Huynh-Feldt	525.347	251.935	2.085		
	Lower-bound	525 347	72 000	7.296		

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	2501.042	1	2501.042	1309.129	.000
GROUP	1.380	2	.690	.361	.698
Error	137.553	72	1.910		

Table 7.5b: Descriptive statistics pre-test data, for 3 groups of subjects, by pedagogic strategy approaches:

Descriptive Statistics

	GROUP	Mean	Std. Deviation	N
reflection	control	2.9000	1.32222	30
	exptl	3.1667	1.41624	30
	uk	2.8000	1.56753	15
	Total	2.9867	1.39974	75
hyperlink	control	2.4333	1.25075	30
	exptl	2.1333	1.63440	30
	uk	2.6000	1.45406	15
	Total	2.3467	1.44721	75
information	control	2.5000	1.30648	30
	exptl	2.9000	1.21343	30
	uk	3.4667	1.45733	15
	Total	2.8533	1.33248	75
multimedia	control	2.6000	1.27577	30
	exptl	2.6000	1.30252	30
	uk	2.5333	1.24595	15
	Total	2.5867	1.26377	75
search	control	2.7667	1.47819	30
	exptl	2.8333	1.14721	30
	uk	2.6000	1.35225	15
	Total	2.7600	1.31355	75

Table 7.6a: Two-factor mixed ANOVA for pre/post-test differences in score (gains) on test items associated with different web-site pedagogic strategies (information; reflection; multimedia; hyperlinks; and search) and the 3 groups of subjects (Group: Control, Experimental, UK experience) testing H_o10:

H_o10. There is NO statistically significant difference between groups (Control, Experimental, UK experience) or pedagogical strategy approaches (information; reflection; multimedia; hyperlinks; and search) on pre/post-test differences (gains) in scores [rejected].

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig
STRATEGY	Sphericity Assumed	14.390	4	3.598	2.925	.021
	Greenhouse-Geisser	14.390	2.525	5.700	2.925	.044
	Huynh-Feldt	14.390	2.697	5.336	2.925	.040
	Lower-bound	14.390	1.000	14.390	2.925	.092
STRATEGY * GROUP	Sphericity Assumed	25.149	8	3.144	2.556	.010
	Greenhouse-Geisser	25.149	5.049	4.981	2.556	.029
	Huynh-Feldt	25.149	5.393	4.663	2.556	.025
	Lower-bound	25.149	2.000	12.575	2.556	.085
Error(STRATEGY)	Sphericity Assumed	354.200	288	1.230		
	Greenhouse-Geisser	354.200	181.779	1.949		
	Huynh-Feldt	354.200	194.161	1.824		
	Lower-bound	354.200	72.000	4.919		

[Note: the more stringent Greenhouse-Geisser test results apply because Mauchly's test for sphericity is significant, but the results are still significant (for Strategy p=0.044; Strategy x Group p=0.029)]

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	197.227	1	197.227	170.132	.000
GROUP	22.251	2	11.125	9.597	.000
Error	83.467	72	1.159		

Table 7.6b: Bonferroni Multiple Comparisons (Group: Control, Experimental, UK experience):

Multiple Comparisons

Measure: MEASURE_1

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
control	exptl	-.4000*	.12433	.006	-.7047	-.0953
	uk	-.6133*	.15227	.000	-.9866	-.2401
exptl	control	.4000*	.12433	.006	.0953	.7047
	uk	-.2133	.15227	.496	-.5866	.1599
uk	control	.6133*	.15227	.000	.2401	.9866
	exptl	.2133	.15227	.496	-.1599	.5866

Based on observed means.

*. The mean difference is significant at the .05 level.

Table 7.6c: Descriptive statistics for pre/post-test differences in scores (gains), for 3 groups of subjects, by pedagogic strategy approaches:

Descriptive Statistics

	GROUP	Mean	Std. Deviation	N
reflection	control	.3000	.74971	30
	exptl	.3000	.59596	30
	uk	.6667	1.04654	15
	Total	.3733	.76712	75
hyperlink	control	.5667	.85836	30
	exptl	1.3667	1.09807	30
	uk	.7333	.88372	15
	Total	.9200	1.02351	75
information	control	.6000	1.00344	30
	exptl	.3000	.59596	30
	uk	1.2667	1.38701	15
	Total	.6133	1.01200	75
multimedia	control	.2667	.52083	30
	exptl	1.0333	.96431	30
	uk	.9333	1.09978	15
	Total	.7067	.91198	75
search	control	.4000	2.28337	30
	exptl	1.1333	1.00801	30
	uk	1.6000	1.45406	15
	Total	.9333	1.75016	75

Table 7.7: Three one-way ANOVAs (Control, Experimental, UK experience groups) for pre/post-test differences in score on test items associated with different pedagogic strategies (information; reflection; multimedia; hyperlinks; and search).

(a) Control Group ANOVA:

H_o11. There are NO statistically significant differences between pedagogical strategy approaches gain scores (information; reflection; multimedia; hyperlinks; and search) for the Control group [confirmed].

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
STRATEGY	Sphericity Assumed	2.760	4	.690	.450	.773
	Greenhouse-Geisser	2.760	1.653	1.670	.450	.603
	Huynh-Feldt	2.760	1.740	1.586	.450	.613
	Lower-bound	2.760	1.000	2.760	.450	.508
Error(STRATEGY)	Sphericity Assumed	178.040	116	1.535		
	Greenhouse-Geisser	178.040	47.924	3.715		
	Huynh-Feldt	178.040	50.451	3.529		
	Lower-bound	178.040	29.000	6.139		

(b) Experimental Group ANOVA:

H_o12. There are NO statistically significant differences between pedagogical strategy approaches gain scores (information; reflection; multimedia; hyperlinks; and search) for the Experimental group [rejected].

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
STRATEGY	Sphericity Assumed	29.493	4	7.373	8.311	.000
	Greenhouse-Geisser	29.493	2.884	10.225	8.311	.000
	Huynh-Feldt	29.493	3.237	9.112	8.311	.000
	Lower-bound	29.493	1.000	29.493	8.311	.007
Error(STRATEGY)	Sphericity Assumed	102.907	116	.887		
	Greenhouse-Geisser	102.907	83.646	1.230		
	Huynh-Feldt	102.907	93.866	1.096		
	Lower-bound	102.907	29.000	3.549		

Table 7.7 (continued)

(c) UK Experience Group ANOVA:

H_o13. There are NO statistically significant differences between pedagogical strategy approaches gain scores (information; reflection; multimedia; hyperlinks; and search) for the UK experience group [confirmed].

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
STRATEGY	Sphericity Assumed	9.147	4	2.287	1.748	.152
	Greenhouse-Geisser	9.147	2.997	3.052	1.748	.172
	Huynh-Feldt	9.147	3.904	2.343	1.748	.154
	Lower-bound	9.147	1.000	9.147	1.748	.207
Error(STRATEGY)	Sphericity Assumed	73.253	56	1.308		
	Greenhouse-Geisser	73.253	41.962	1.746		
	Huynh-Feldt	73.253	54.662	1.340		
	Lower-bound	73.253	14.000	5.232		

Table 7.8: Parametric Paired Samples t-tests, Non-parametric Wilcoxon Signed Ranks test and Non-parametric Sign test for comparisons for pre/post-test gains on test items associated with different pedagogic strategies (information; reflection; multimedia; hyperlinks; and search) for the Experimental Group.

Paired Samples Test

		Paired Differences					t	df	Sig (2-tailed)
		Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	reflection - information	.0000	.94686	.17287	-.3536	.3536	.000	29	1 000
Pair 2	reflection - hyperlink	-1.0667	1.31131	.23941	-1.5563	-.5770	-4.455	29	.000
Pair 3	reflection - multimedia	-.7333	1.25762	.22961	-1.2029	-.2637	-3.194	29	.003
Pair 4	reflection - search	-.8333	1.14721	.20945	-1.2617	-.4050	-3.979	29	.000
Pair 5	hyperlink - information	1.0667	1.31131	.23941	.5770	1.5563	4.455	29	.000
Pair 6	information - multimedia	-.7333	1.08066	.19730	-1.1369	-.3298	-3.717	29	.001
Pair 7	information - search	-.8333	1.17688	.21487	-1.2728	-.3939	-3.878	29	.001
Pair 8	hyperlink - search	.2333	1.71572	.31325	-.4073	.8740	.745	29	.462
Pair 9	hyperlink - multimedia	.3333	1.39786	.25521	-.1886	.8553	1.306	29	.202
Pair 10	multimedia - search	- 1000	1 74889	31930	- 7530	5530	- 313	29	756

Test Statistics[d]

	information - reflection	hyperlink - reflection	multimedia - reflection	search - reflection	information - hyperlink	multimedia - information	search - information	search - hyperlink	multimedia - hyperlink	search - multimedia
Z	.000[a]	-3 528[b]	-2 651[b]	-3 290[b]	-3 456[c]	-3 147[b]	-3.226[b]	-.699[c]	-1.223[c]	-.315[b]
Asymp Sig (2-tailed)	1 000	000	008	001	001	002	001	.485	221	753

a. The sum of negative ranks equals the sum of positive ranks.

b. Based on negative ranks.

c. Based on positive ranks.

d. Wilcoxon Signed Ranks Test

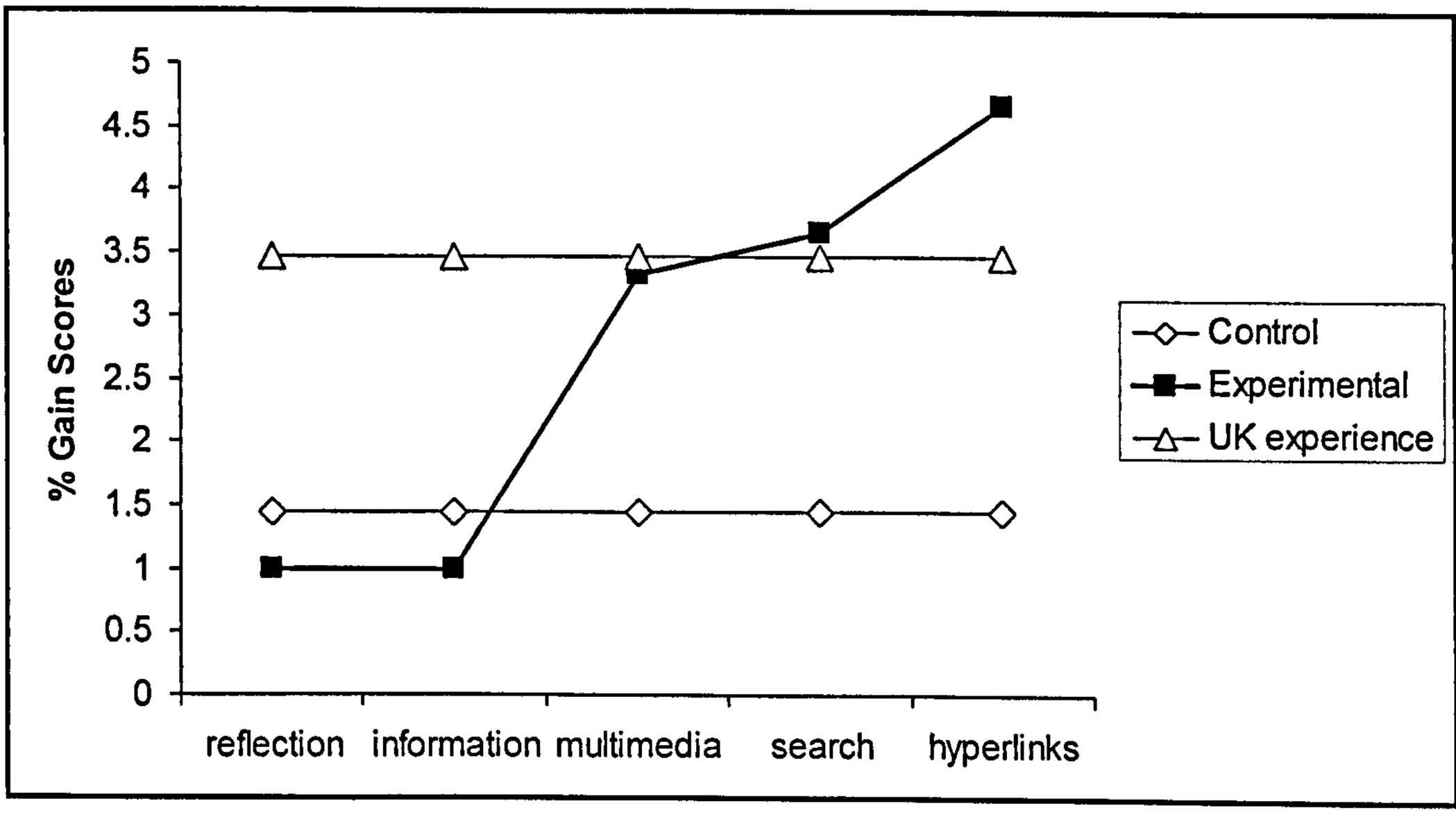
Test Statistics[b]

	information - reflection	hyperlink - reflection	multimedia - reflection	search - reflection	information - hyperlink	multimedia - information	search - information	search - hyperlink	multimedia - hyperlink	search - multimedia
Exact Sig (2-tailed)	1 000[a]	003[a]	.004[a]	004[a]	001[a]	.008[a]	004[a]	424[a]	093[a]	1 000[a]

a Binomial distribution used.

b. Sign Test

Figure 7.1: Mean gain scores on test items associated with different pedagogic strategies (information; reflection; multimedia; hyperlinks; and search) for the Experimental Group; compared with mean gain scores for Control and UK experience groups.



APPENDIX VI

CHAPTER 8 TABLES AND FIGURES

Table 8.1: ANOVA results for $H_0$1:

$H_0$1. There is NO statistically significant difference in the number of words written by the four groups (Control, Experimental, UK, and Chinese) prior to the experimental period [rejected].

Descriptives

Pre-experiment total number of words

	N	Mean	Std Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
experimental	30	414.2667	45.67798	8.33962	397.2102	431.3231	301.00	492.00
control	30	417.8000	45.76507	8.35552	400.7110	434.8890	312.00	490.00
uk	15	451.0000	107.29266	27.70284	391.5833	510.4167	343.00	793.00
chinese	30	504.0667	71.54691	13.06262	477.3506	530.7827	350.00	742.00
Total	105	446 1810	75 09299	7.32833	431 6486	460.7133	301 00	793 00

ANOVA

Pre-experiment total number of words

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	155591.0	3	51863.676	12.158	.000
Within Groups	430860.5	101	4265.946		
Total	586451.6	104			

Table 8.1 (continued)

Multiple Comparisons

Dependent Variable: Pre-experiment total number of words

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
experimental	control	-3.5333	16.86406	1.000	-48.9181	41.8515
	uk	-36.7333	20.65417	.470	-92.3182	18.8515
	chinese	-89.8000*	16.86406	.000	-135.1848	-44.4152
control	experimental	3.5333	16.86406	1.000	-41.8515	48.9181
	uk	-33.2000	20.65417	.666	-88.7848	22.3848
	chinese	-86.2667*	16.86406	.000	-131.6515	-40.8819
uk	experimental	36.7333	20.65417	.470	-18.8515	92.3182
	control	33.2000	20.65417	.666	-22.3848	88.7848
	chinese	-53.0667	20.65417	.070	-108.6515	2.5182
chinese	experimental	89.8000*	16.86406	.000	44.4152	135.1848
	control	86.2667*	16.86406	.000	40.8819	131.6515
	uk	53.0667	20.65417	.070	-2.5182	108.6515

*. The mean difference is significant at the .05 level.

Table 8.2: ANOVA results for H_o2:

H_o2. There is NO statistically significant difference in the number of words written by the two groups (Control and Experimental) after the experimental period, when compared with the two groups (UK and Chinese) prior to the experimental period [rejected].

Descriptives

Post-experiment total number of words

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
experimental	30	456.9000	38.99014	7.11859	442.3408	471.4592	403.00	514.00
control	30	436.5333	50.00051	9.12880	417.8628	455.2038	342.00	528.00
uk	15	451.0000	107.29266	27.70284	391.5833	510.4167	343.00	793.00
chinese	30	504.0667	71.54691	13.06262	477.3506	530.7827	350.00	742.00
Total	105	463.7143	69.40914	6.77364	450.2819	477.1467	342.00	793.00

ANOVA

Post-experiment total number of words

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	74831.395	3	24943.798	5.911	.001
Within Groups	426202.0	101	4219.822		
Total	501033.4	104			

Multiple Comparisons

Dependent Variable: Post-experiment total number of words

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
experimental	control	20.3667	16.77264	1.000	-24.7721	65.5055
	uk	5.9000	20.54221	1.000	-49.3835	61.1835
	chinese	-47.1667*	16.77264	.035	-92.3055	-2.0279
control	experimental	-20.3667	16.77264	1.000	-65.5055	24.7721
	uk	-14.4667	20.54221	1.000	-69.7502	40.8168
	chinese	-67.5333*	16.77264	.001	-112.6721	-22.3945
uk	experimental	-5.9000	20.54221	1.000	-61.1835	49.3835
	control	14.4667	20.54221	1.000	-40.8168	69.7502
	chinese	-53.0667	20.54221	.067	-108.3502	2.2168
chinese	experimental	47.1667*	16.77264	.035	2.0279	92.3055
	control	67.5333*	16.77264	.001	22.3945	112.6721
	uk	53.0667	20.54221	.067	-2.2168	108.3502

*. The mean difference is significant at the .05 level.

Table 8.3: Results for H_o3 - H_o7:

H_o3. There is NO statistically significant difference in the number of discourse markers used by the two groups (UK and Chinese) in their essays [rejected].

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total discourse markers	uk	15	16.4667	4.85308	1.25306
	chinese	30	1.7333	1.17248	.21406

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total discourse markers	Equal variances assumed	26.279	.000	15 892	43	.000	14.7333	.92711	12 86364	16.60303
	Equal variances not assumed			11.590	14.823	.000	14.7333	1.27121	12.02099	17.44568

H_o4. There is NO statistically significant difference in the number of paragraphs used by the two groups (UK and Chinese) in their essays [rejected].

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total number of paragraphs	uk	15	5.1333	1.50555	.38873
	chinese	30	4.0000	.74278	.13561

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total number of paragraphs	Equal variances assumed	13 332	.001	3.402	43	.001	1.1333	.33318	.46142	1 80525
	Equal variances not assumed			2.753	17.490	.013	1.1333	.41171	.26656	2 00011

H_o5. There is NO statistically significant difference in the number of students in the two groups (UK and Chinese) using metaphors and proverbs in their essays [rejected].

GROUP * Pre-experimental metaphor present Crosstabulation

			Pre-experimental metaphor present		Total
			no	yes	
GROUP	uk	Count	13	2	15
		% within GROUP	86.7%	13.3%	100.0%
	chinese	Count	10	20	30
		% within GROUP	33.3%	66.7%	100.0%
Total		Count	23	22	45
		% within GROUP	51.1%	48.9%	100.0%

Table 8.3 (cont.)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11.383[b]	1	.001		
Continuity Correction[a]	9.349	1	.002		
Likelihood Ratio	12.390	1	.000		
Fisher's Exact Test				.001	.001
Linear-by-Linear Association	11.130	1	.001		
N of Valid Cases	45				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.33.

H_o6. There is NO statistically significant difference in the number of students in the two groups (UK and Chinese) changing topics in paragraphs in their essays [rejected].

GROUP * Pre-experimental topic changes Crosstabulation

			Pre-experimental topic changes		
			no	yes	Total
GROUP	uk	Count	15		15
		% within GROUP	100.0%		100.0%
	chinese	Count	19	11	30
		% within GROUP	63.3%	36.7%	100.0%
Total		Count	34	11	45
		% within GROUP	75.6%	24.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.279[b]	1	.007		
Continuity Correction[a]	5.429	1	.020		
Likelihood Ratio	10.624	1	.001		
Fisher's Exact Test				.008	.005
Linear-by-Linear Association	7.118	1	.008		
N of Valid Cases	45				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.67.

Table 8.3 (cont.)

H_o7. There is NO statistically significant difference in the position of the thesis statement used by the two groups (UK and Chinese) in their essays [rejected].

GROUP * Pre-experiment thesis paragraph Crosstabulation

			Pre-experiment thesis paragraph					Total
			1.00	2 00	3.00	4.00	5.00	
GROUP	uk	Count	9	2		2	2	15
		% within GROUP	60.0%	13.3%		13.3%	13.3%	100.0%
	chinese	Count	5	1	6	18		30
		% within GROUP	16.7%	3.3%	20.0%	60.0%		100.0%
Total		Count	14	3	6	20	2	45
		% within GROUP	31.1%	6 7%	13 3%	44.4%	4.4%	100 0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.436[a]	4	.001
Likelihood Ratio	22.215	4	.000
Linear-by-Linear Association	6.971	1	.008
N of Valid Cases	45		

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .67.

Table 8.4: ANOVA results for H_o8 - H_o12:

H_o8. There is NO statistically significant difference in the number of discourse markers used by the two groups (Experimental and Control) in their pre-experimental period essays [confirmed].

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total discourse markers	experimental	30	10.3000	2.70568	.49399
	control	30	10.6667	2.26416	.41338

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total discourse markers	Equal variances assumed	1.300	.259	-.569	58	.571	-.3667	.64413	-1.65603	.92270
	Equal variances not assumed			-.569	56.252	.571	-.3667	.64413	-1.65689	.92355

H_o9. There is NO statistically significant difference in the number of paragraphs used by the two groups (Experimental and Control) in their pre-experimental period essays [confirmed].

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total number of paragraphs	experimental	30	4.0000	.83045	.15162
	control	30	3.9333	.73968	.13505

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total number of paragraphs	Equal variances assumed	.380	.540	.328	58	.744	.0667	.20304	-.33977	.47310
	Equal variances not assumed			.328	57.240	.744	.0667	.20304	-.33988	.47321

H_o10. There is NO statistically significant difference in the number of students in the two groups (Experimental and Control) using metaphors and proverbs in their pre-experimental period essays [confirmed].

GROUP * Pre-experimental metaphor present Crosstabulation

			Pre-experimental metaphor present		
			no	yes	Total
GROUP	experimental	Count	18	12	30
		% within GROUP	60.0%	40.0%	100.0%
	control	Count	18	12	30
		% within GROUP	60.0%	40.0%	100.0%
Total		Count	36	24	60
		% within GROUP	60.0%	40.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.000[b]	1	1.000		
Continuity Correction[a]	.000	1	1.000		
Likelihood Ratio	.000	1	1.000		
Fisher's Exact Test				1.000	.604
Linear-by-Linear Association	.000	1	1.000		
N of Valid Cases	60				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.00.

H_o11. There is NO statistically significant difference in the number of students in the two groups (Experimental and Control) changing topics in paragraphs in their pre-experimental period essays [confirmed].

GROUP * Pre-experimental topic changes Crosstabulation

			Pre-experimental topic changes		
			no	yes	Total
GROUP	experimental	Count	26	4	30
		% within GROUP	86.7%	13.3%	100.0%
	control	Count	25	5	30
		% within GROUP	83.3%	16.7%	100.0%
Total		Count	51	9	60
		% within GROUP	85.0%	15.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.131[b]	1	.718		
Continuity Correction[a]	.000	1	1.000		
Likelihood Ratio	.131	1	.717		
Fisher's Exact Test				1.000	.500
Linear-by-Linear Association	.129	1	.720		
N of Valid Cases	60				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.50.

H_o12. There is NO statistically significant difference in the position of the thesis statement used by the two groups (Experimental and Control) in their pre-experimental period essays [confirmed].

GROUP * Pre-experiment thesis paragraph Crosstabulation

			Pre-experiment thesis paragraph						Total
			1 00	2 00	3 00	4.00	5 00	6 00	
GROUP	experimental	Count	9	4	9	5		3	30
		% within GROUP	30.0%	13.3%	30.0%	16.7%		10.0%	100.0%
	control	Count	8		7	10	3	2	30
		% within GROUP	26.7%		23.3%	33.3%	10.0%	6.7%	100.0%
Total		Count	17	4	16	15	3	5	60
		% within GROUP	28.3%	6 7%	26.7%	25.0%	5.0%	8 3%	100 0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.175[a]	5	.102
Likelihood Ratio	11.914	5	.036
Linear-by-Linear Association	1.339	1	.247
N of Valid Cases	60		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is 1.50.

Table 8.4: ANOVA results for H_o13 - H_o17:

H_o13. There is NO statistically significant difference in the number of discourse markers used by the combined experimental study group in their pre-experimental period essays and the essays written in Chinese by Chinese subjects, when controlled for the relative number of words in the essays [rejected].

Group Statistics

	GROUPED	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment discourse markers per 100 words	combined experimental study group	60	2.5608	.73243	.09456
	chinese	30	.3484	.23074	.04213

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment discourse markers per 100 words	Equal variances assumed	24.430	.000	16.110	88	.000	2.2124	.13733	1.93947	2 48532
	Equal variances not assumed			21.372	78 458	.000	2 2124	.10352	2.00633	2.41846

H_o14. There is NO statistically significant difference in the number of paragraphs used by the combined experimental study group in their pre-experimental period essays and the essays written in Chinese by Chinese subjects, when controlled for the relative number of words in the essays [rejected].

Group Statistics

	GROUPED	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment number of paragraphs per 100 words	combined experimental study group	60	.9607	.19142	.02471
	chinese	30	.8106	.19845	.03623

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment number of paragraphs per 100 words	Equal variances assumed	.133	.716	3 464	88	.001	.1501	.04333	.06399	.23620
	Equal variances not assumed			3.422	56.272	.001	.1501	.04386	.06225	.23794

H_o15. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and Chinese group writing Chinese) using metaphors and proverbs in their pre-experimental period essays [rejected].

GROUPED * Pre-experimental metaphor present Crosstabulation

			Pre-experimental metaphor present		Total
			no	yes	
GROUPED	combined experimental study group	Count	36	24	60
		% within GROUPED	60.0%	40.0%	100.0%
	chinese	Count	10	20	30
		% within GROUPED	33.3%	66.7%	100.0%
Total		Count	46	44	90
		% within GROUPED	51.1%	48.9%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.692[b]	1	.017		
Continuity Correction[a]	4.675	1	.031		
Likelihood Ratio	5.770	1	.016		
Fisher's Exact Test				.025	.015
Linear-by-Linear Association	5.628	1	.018		
N of Valid Cases	90				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.67.

H_o16. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and Chinese group writing Chinese) changing topics in paragraphs in their pre-experimental period essays [rejected].

GROUPED * Pre-experimental topic changes Crosstabulation

			Pre-experimental topic changes		Total
			no	yes	
GROUPED	combined experimental study group	Count	51	9	60
		% within GROUPED	85.0%	15.0%	100.0%
	chinese	Count	19	11	30
		% within GROUPED	63.3%	36.7%	100.0%
Total		Count	70	20	90
		% within GROUPED	77.8%	22.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.432[b]	1	.020		
Continuity Correction[a]	4.251	1	.039		
Likelihood Ratio	5.193	1	.023		
Fisher's Exact Test				.030	.021
Linear-by-Linear Association	5.372	1	.020		
N of Valid Cases	90				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.67.

H_o17. There is NO statistically significant difference in the position of the thesis statement used by the two groups (combined experimental study group and Chinese group writing Chinese) in their pre-experimental period essays [confirmed].

GROUPED * Pre-experiment thesis paragraph Crosstabulation

			Pre-experiment thesis paragraph				Total
			1.00	2.00	3 00	4 00	
GROUPED	combined experimental study group	Count	17	4	16	23	60
		% within GROUPED	28.3%	6.7%	26.7%	38.3%	100.0%
	chinese	Count	5	1	6	18	30
		% within GROUPED	16.7%	3.3%	20 0%	60.0%	100.0%
Total		Count	22	5	22	41	90
		% within GROUPED	24 4%	5.6%	24.4%	45.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.938[a]	3	.268
Likelihood Ratio	3.978	3	.264
Linear-by-Linear Association	3.120	1	.077
N of Valid Cases	90		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 1.67.

Table 8.5: ANOVA results for H_o18 - H_o22:

H_o18. There is NO statistically significant difference in the number of discourse markers used by the combined experimental study group in their pre-experimental period essays and the essays written in English by UK subjects [rejected].

Group Statistics

	GROUPED	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total discourse markers	combined experimental study group	60	10.4833	2.48037	.32022
	uk	15	16.4667	4.85308	1.25306

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total discourse markers	Equal variances assumed	11.183	.001	-6.728	73	.000	-5 9833	.88925	-7.75561	-4 21105
	Equal variances not assumed			-4.626	15 872	.000	-5 9833	1.29333	-8 72686	-3 23981

H_o19. There is NO statistically significant difference in the number of paragraphs used by the combined experimental study group in their pre-experimental period essays and the essays written in English by UK subjects [rejected].

Group Statistics

	GROUPED	N	Mean	Std. Deviation	Std. Error Mean
Pre-experiment total number of paragraphs	combined experimental study group	60	3.9667	.78041	.10075
	uk	15	5.1333	1.50555	.38873

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-experiment total number of paragraphs	Equal variances assumed	15.197	.000	-4.198	73	.000	-1.1667	.27793	-1.72058	-.61275
	Equal variances not assumed			-2.905	15 927	.010	-1.1667	.40157	-2.01828	-.31505

H_o20. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and UK group) using metaphors and proverbs in their pre-experimental period essays [rejected].

GROUPED * Pre-experimental metaphor present Crosstabulation

			Pre-experimental metaphor present		
			no	yes	Total
GROUPED	combined experimental study group	Count	36	24	60
		% within GROUPED	60.0%	40.0%	100.0%
	uk	Count	13	2	15
		% within GROUPED	86.7%	13.3%	100.0%
Total		Count	49	26	75
		% within GROUPED	65.3%	34.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.768[b]	1	.052		
Continuity Correction[a]	2.682	1	.101		
Likelihood Ratio	4.262	1	.039		
Fisher's Exact Test				.070	.046
Linear-by-Linear Association	3.717	1	.054		
N of Valid Cases	75				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.20.

H_o21. There is NO statistically significant difference in the number of students in the two groups (combined experimental study group and UK group) changing topics in paragraphs in their pre-experimental period essays [confirmed].

GROUPED * Pre-experimental topic changes Crosstabulation

			Pre-experimental topic changes		
			no	yes	Total
GROUPED	combined experimental study group	Count	51	9	60
		% within GROUPED	85.0%	15.0%	100.0%
	uk	Count	15		15
		% within GROUPED	100.0%		100.0%
Total		Count	66	9	75
		% within GROUPED	88.0%	12.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.557[b]	1	.110		
Continuity Correction[a]	1.334	1	.248		
Likelihood Ratio	4.314	1	.038		
Fisher's Exact Test				.190	.118
Linear-by-Linear Association	2.523	1	.112		
N of Valid Cases	75				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.80.

H_o22. There is NO statistically significant difference in the position of the thesis statement used by the two groups (combined experimental study group and UK group) in their pre-experimental period essays [rejected].

GROUPED * Pre-experiment thesis paragraph Crosstabulation

			Pre-experiment thesis paragraph				Total
			1 00	2.00	3 00	4 00	
GROUPED	combined experimental study group	Count	17	4	16	23	60
		% within GROUPED	28 3%	6.7%	26.7%	38.3%	100.0%
	uk	Count	9	2		4	15
		% within GROUPED	60.0%	13.3%		26.7%	100.0%
Total		Count	26	6	16	27	75
		% within GROUPED	34 7%	8 0%	21.3%	36 0%	100 0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.592[a]	3	.035
Likelihood Ratio	11.228	3	.011
Linear-by-Linear Association	4.769	1	.029
N of Valid Cases	75		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 1.20.

Figure 8.1: Comparative values on five measures of rhetorical style for the Experimental Study Group (60 subjects), Chinese Writers Group (30 subjects) and UK Writers Group (15 subjects), expressed as percentage of UK Group scores.

[Note: all differences between Chinese writers and UK writers statistically significant; differences between Chinese writers and Experimental Study Group, except thesis placement, statistically significant; differences between UK writers and Experimental Study Group, except topic changes in paragraphs, statistically significant.]

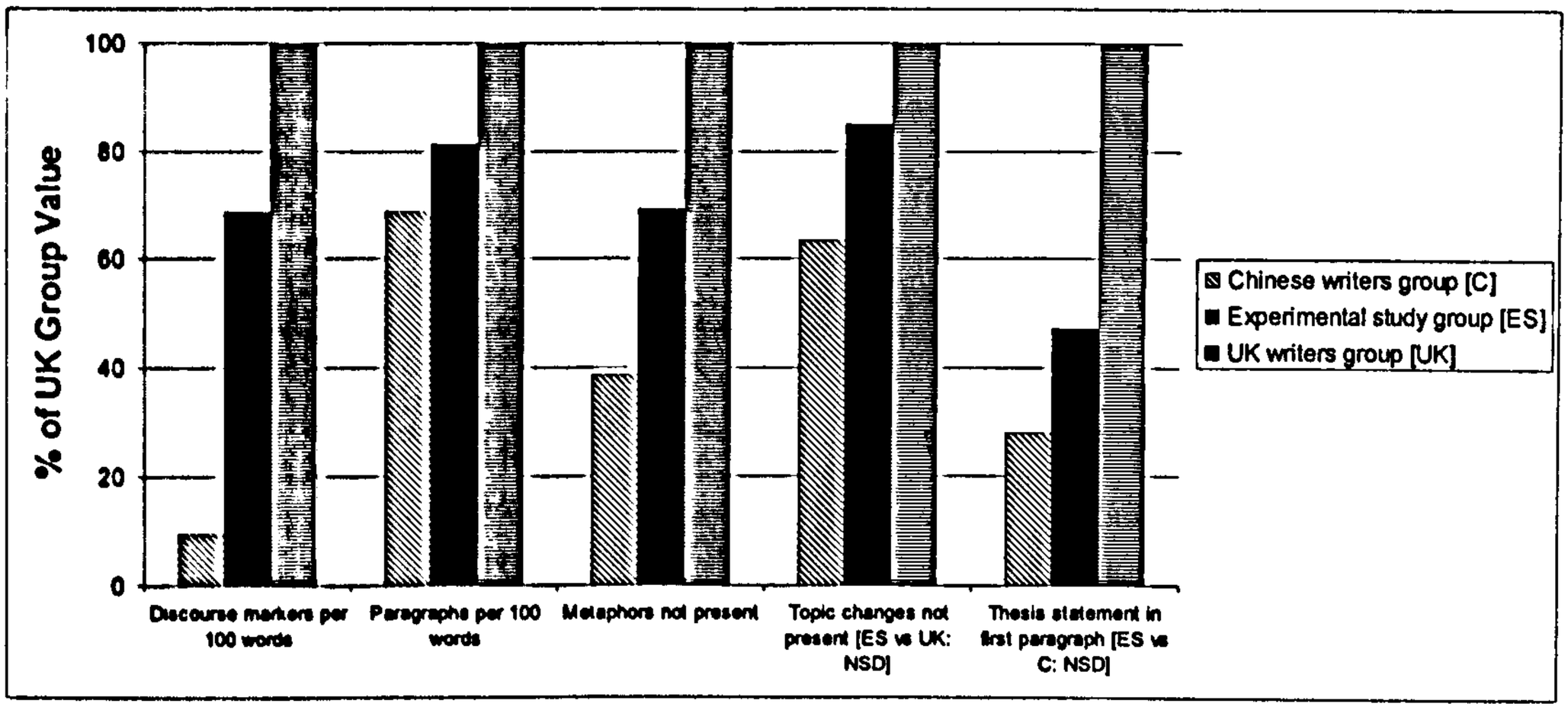


Table 8.6: ANOVA results for comparison of number of words written for post-experimental essays:

Descriptives

Post-experiment total number of words

	N	Mean	Std Deviation	Std Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
experimental	30	456.9000	38 99014	7.11859	442.3408	471.4592	403.00	514.00
control	30	436.5333	50.00051	9.12880	417.8628	455.2038	342.00	528.00
uk	15	451.0000	107.29266	27.70284	391.5833	510.4167	343.00	793.00
Total	75	447 5733	61 97148	7 15585	433 3150	461 8317	342 00	793 00

ANOVA

Post-experiment total number of words

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6442.180	2	3221.090	.835	.438
Within Groups	277752.2	72	3857.669		
Total	284194.3	74			

Table 8.7: ANOVA results for H_o23 - H_o27:

H_o23. There is NO statistically significant difference in the number of discourse markers used by the E-learning experimental group and the control group in their final post-experimental period essays and the essays written in English by UK subjects [rejected].

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
experimental	30	19.6667	2.10637	.38457	18.8801	20.4532	14.00	22.00
control	30	13.6667	2.27934	.41615	12.8155	14.5178	9.00	17.00
uk	15	16.4667	4.85308	1.25306	13.7791	19.1542	10.00	25.00
Total	75	16.6267	3.94137	.45511	15.7198	17.5335	9.00	25.00

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	540.480	2	270.240	31.946	.000
Within Groups	609.067	72	8.459		
Total	1149.547	74			

Multiple Comparisons

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
experimental	control	6.0000*	.75097	.000	4.1592	7.8408
	uk	3.2000*	.91974	.003	.9455	5.4545
control	experimental	-6.0000*	.75097	.000	-7.8408	-4.1592
	uk	-2.8000*	.91974	.010	-5.0545	-.5455
uk	experimental	-3.2000*	.91974	.003	-5.4545	-.9455
	control	2.8000*	.91974	.010	.5455	5.0545

*. The mean difference is significant at the .05 level.

H_o24. There is NO statistically significant difference in the number of paragraphs used by the E-learning experimental group and the control group in their final post-experimental period essays and the essays written in English by UK subjects.[rejected]

Descriptives

Post-experimental total number of paragraphs

	N	Mean	Std. Deviation	Std Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
experimental	30	6.0333	.71840	.13116	5.7651	6.3016	5.00	7.00
control	30	4.6000	1.03724	.18937	4.2127	4.9873	3.00	7.00
uk	15	5.1333	1.50555	.38873	4.2996	5.9671	2.00	7.00
Total	75	5 2800	1.21433	.14022	5 0006	5 5594	2 00	7 00

ANOVA

Post-experimental total number of paragraphs

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	31.220	2	15.610	14.428	.000
Within Groups	77.900	72	1.082		
Total	109.120	74			

Multiple Comparisons

Dependent Variable: Post-experimental total number of paragraphs

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
experimental	control	1.4333*	.26857	.000	.7750	2.0917
	uk	.9000*	.32893	.023	.0937	1.7063
control	experimental	-1.4333*	.26857	.000	-2.0917	-.7750
	uk	-.5333	.32893	.328	-1.3396	.2729
uk	experimental	-.9000*	.32893	.023	-1.7063	-.0937
	control	.5333	.32893	.328	-.2729	1.3396

*. The mean difference is significant at the .05 level.

H_o25. There is NO statistically significant difference in the number of students in the experimental [E-learning] group and control group using metaphors and proverbs in their final post-experimental period essays and the number of students in the UK group using metaphors and proverbs in the essays written in English by UK subjects. [rejected]

GROUP * Post-experiment metaphor present Crosstabulation

			Post-experiment metaphor present		
			no	yes	Total
GROUP	experimental	Count	14	16	30
		% within GROUP	46.7%	53.3%	100.0%
	control	Count	17	13	30
		% within GROUP	56.7%	43.3%	100.0%
	uk	Count	13	2	15
		% within GROUP	86.7%	13.3%	100.0%
Total		Count	44	31	75
		% within GROUP	58.7%	41.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.681[a]	2	.035
Likelihood Ratio	7.418	2	.025
Linear-by-Linear Association	5.894	1	.015
N of Valid Cases	75		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.20.

Multiple Comparisons:

GROUP * Post-experiment metaphor present Crosstabulation

			Post-experiment metaphor present		
			no	yes	Total
GROUP	experimental	Count	14	16	30
		% within GROUP	46.7%	53.3%	100.0%
	control	Count	17	13	30
		% within GROUP	56.7%	43.3%	100.0%
Total		Count	31	29	60
		% within GROUP	51.7%	48.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.601[b]	1	.438		
Continuity Correction[a]	.267	1	.605		
Likelihood Ratio	.602	1	.438		
Fisher's Exact Test				.606	.303
Linear-by-Linear Association	.591	1	.442		
N of Valid Cases	60				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.50.

GROUP * Post-experiment metaphor present Crosstabulation

			Post-experiment metaphor present		Total
			no	yes	
GROUP	control	Count	17	13	30
		% within GROUP	56.7%	43.3%	100.0%
	uk	Count	13	2	15
		% within GROUP	86.7%	13.3%	100.0%
Total		Count	30	15	45
		% within GROUP	66.7%	33.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.050[b]	1	.044		
Continuity Correction[a]	2.813	1	.094		
Likelihood Ratio	4.452	1	.035		
Fisher's Exact Test				.053	.043
Linear-by-Linear Association	3.960	1	.047		
N of Valid Cases	45				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.00.

GROUP * Post-experiment metaphor present Crosstabulation

			Post-experiment metaphor present		Total
			no	yes	
GROUP	experimental	Count	14	16	30
		% within GROUP	46.7%	53.3%	100.0%
	uk	Count	13	2	15
		% within GROUP	86.7%	13.3%	100.0%
Total		Count	27	18	45
		% within GROUP	60.0%	40.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.667[b]	1	.010		
Continuity Correction[a]	5.104	1	.024		
Likelihood Ratio	7.335	1	.007		
Fisher's Exact Test				.012	.010
Linear-by-Linear Association	6.519	1	.011		
N of Valid Cases	45				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.00.

H_o26. There is NO statistically significant difference in the number of students in the experimental [E-learning] group and control group changing topics in paragraphs in their final post-experimental period essays and the number of students in the UK group changing topics in paragraphs in the pre-experimental essays written in English by UK subjects.[confirmed]

GROUP * Pre-experimental topic changes Crosstabulation

			Pre-experimental topic changes		Total
			no	yes	
GROUP	experimental	Count	26	4	30
		% within GROUP	86.7%	13.3%	100.0%
	control	Count	25	5	30
		% within GROUP	83.3%	16.7%	100.0%
	uk	Count	15		15
		% within GROUP	100.0%		100.0%
Total		Count	66	9	75
		% within GROUP	88.0%	12.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.750[a]	2	.153
Likelihood Ratio	4.410	2	.110
Linear-by-Linear Association	.000	1	1.000
N of Valid Cases	75		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.00.

H_o27. There is NO statistically significant difference in the position of the thesis statement used by the experimental [E-learning] group and control group in their final post-experimental period essays and the pre-experimental essays written in English by UK subjects. [rejected]

GROUP * Post-experiment thesis paragraph Crosstabulation

			Post-experiment thesis paragraph					Total
			1 00	2 00	3 00	4 00	5 00	
GROUP	experimental	Count	20		2	1	7	30
		% within GROUP	66.7%		6.7%	3.3%	23.3%	100.0%
	control	Count	13		1	12	4	30
		% within GROUP	43.3%		3.3%	40.0%	13.3%	100.0%
	uk	Count	9	2		2	2	15
		% within GROUP	60.0%	13.3%		13.3%	13.3%	100.0%
Total		Count	42	2	3	15	13	75
		% within GROUP	56 0%	2.7%	4 0%	20 0%	17.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.217[a]	8	.005
Likelihood Ratio	22.109	8	.005
Linear-by-Linear Association	.034	1	.855
N of Valid Cases	75		

a. 8 cells (53.3%) have expected count less than 5. The minimum expected count is .40.

Control Group and Experimental Group Comparison:

GROUP * Post-experiment thesis paragraph Crosstabulation

			Post-experiment thesis paragraph						Total
			1 00	3 00	4 00	5 00	6 00	7.00	
GROUP	experimental	Count	20	2	1	2	2	3	30
		% within GROUP	66.7%	6.7%	3.3%	6.7%	6.7%	10.0%	100.0%
	control	Count	13	1	12	3	1		30
		% within GROUP	43.3%	3.3%	40.0%	10.0%	3.3%		100.0%
Total		Count	33	3	13	5	3	3	60
		% within GROUP	55 0%	5 0%	21.7%	8 3%	5 0%	5 0%	100 0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.659[a]	5	.012
Likelihood Ratio	17.507	5	.004
Linear-by-Linear Association	.611	1	.435
N of Valid Cases	60		

a. 8 cells (66.7%) have expected count less than 5. The minimum expected count is 1.50.

Figure 8.2: Comparative values on five measures of rhetorical style for the Experimental (E-learning) Group (30 subjects), Control Group (30 subjects) and UK Writers Group (15 subjects), expressed as percentage of UK Group scores.

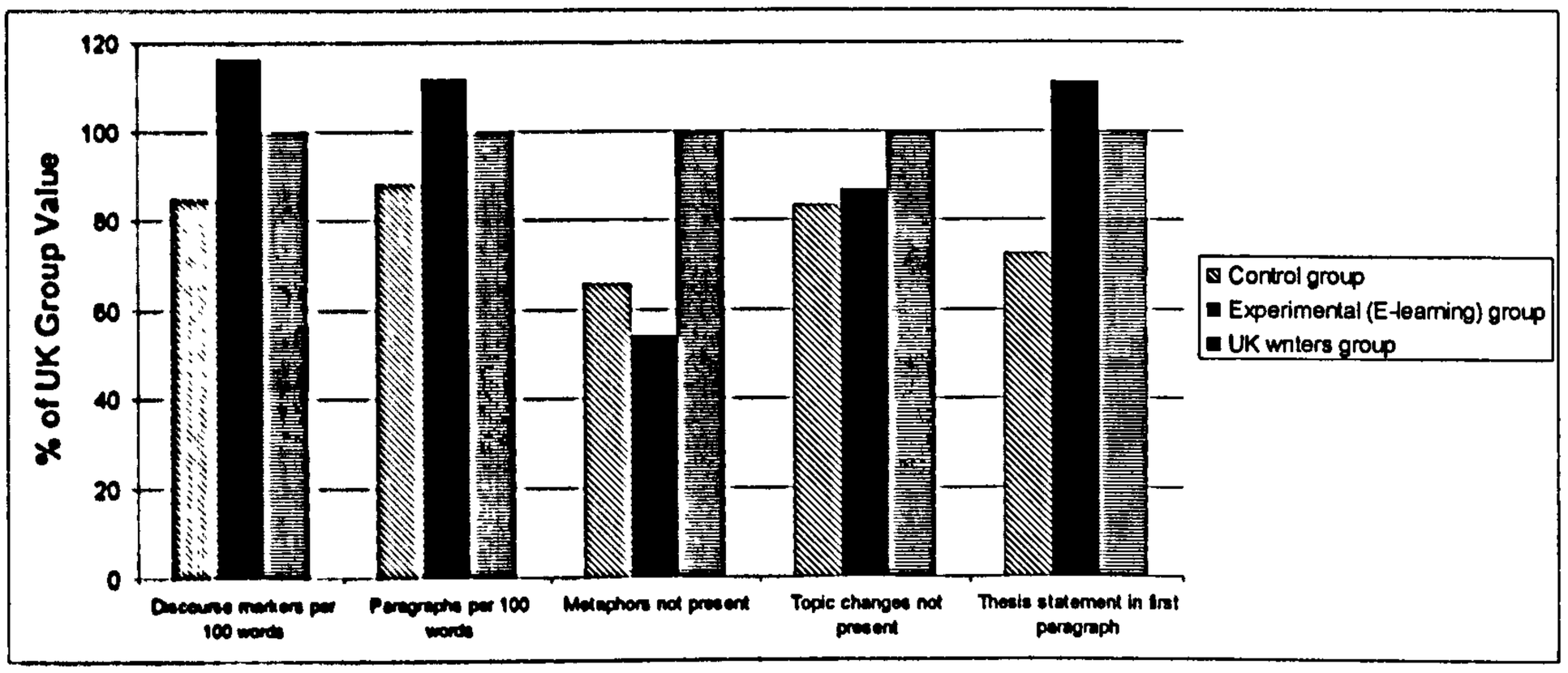


Figure 8.3: SUMMARY: Comparative values on five measures of rhetorical style for the Chinese Writers Group (30 subjects), Combined Pre-Experimental Study Group (60 subjects), Control Group (30 subjects), Experimental (E-learning) Group (30 subjects) and UK Writers Group (15 subjects), expressed as percentage of UK Group scores.

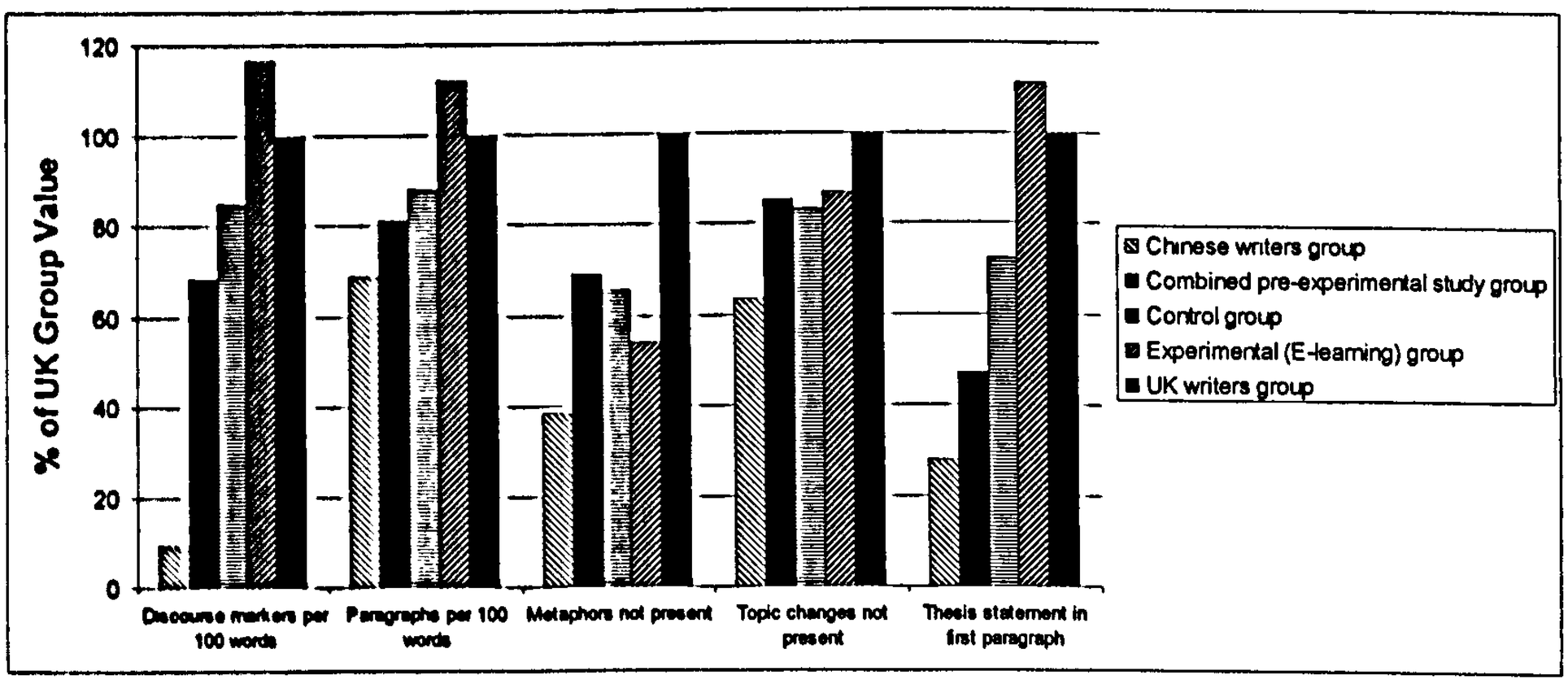


Table 8.8: T-test results for H_o28 - H_o31:

H_o28. There is NO statistically significant difference in the marks awarded to the experimental [E-learning] group and control group in their pre-experimental period essays. [confirmed]

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Pre-experimental essay mark	experimental	30	51.3333	3.26247	.59564
	control	30	51.2667	2.72831	.49812

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Pre-experimental essay mark	Equal variances assumed	1.277	.263	.086	58	.932	.0667	.77647	-1.48761	1.62095
	Equal variances not assumed			.086	56.240	.932	.0667	.77647	-1.48865	1.62198

H_o29. There is NO statistically significant difference in the marks awarded to the experimental [E-learning] group and control group in their post-experimental period essays. [rejected]

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Post-experimental essay mark	experimental	30	66.1333	3.73920	.68268
	control	30	57.0000	3.40385	.62146

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Post-experimental essay mark	Equal variances assumed	.485	.489	9 893	58	000	9.1333	.92318	7.28539	10.98128
	Equal variances not assumed			9 893	57 495	.000	9.1333	.92318	7.28504	10.98162

H_o30. There is NO statistically significant difference in the marks awarded to the experimental [E-learning] group for their pre-experimental and post-experimental period essays. [rejected]

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-experimental essay mark	51.3333	30	3.26247	.59564
	Post-experimental essay mark	66.1333	30	3.73920	.68268

Paired Samples Test

		Paired Differences					t	df	Sig (2-tailed)
		Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pre-experimental essay mark - Post-experimental essay mark	-14 8000	3 52723	.64398	-16.1171	-13.4829	-22.982	29	.000

H_o31. There is NO statistically significant difference in the marks awarded to the control group for their pre-experimental and post-experimental period essays. [rejected]

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-experimental essay mark	51.2667	30	2.72831	.49812
	Post-experimental essay mark	57.0000	30	3.40385	.62146

Paired Samples Test

		Paired Differences					t	df	Sig (2-tailed)
		Mean	Std Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pre-experimental essay mark - Post-experimental essay mark	-5 7333	2 70291	.49348	-6.7426	-4.7240	-11.618	29	.000

Table 8.9: Step-wise Multiple Regression Analysis for Pre-experimental Essay Scores:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.584[a]	.342	.330	2.44028	.342	30.094	1	58	.000
2	.645[b]	.416	.395	2.31870	.074	7.242	1	57	.009
3	.703[c]	.494	.467	2.17660	.078	8.686	1	56	.005
4	.730[d]	532	.498	2 11176	038	4 492	1	55	.039

a. Predictors: (Constant), Pre-experimental metaphor present

b. Predictors: (Constant), Pre-experimental metaphor present, Pre-experiment total linguistic markers

c. Predictors: (Constant), Pre-experimental metaphor present, Pre-experiment total linguistic markers, Pre-experiment thesis paragraph

d. Predictors: (Constant), Pre-experimental metaphor present, Pre-experiment total linguistic markers, Pre-experiment thesis paragraph, Pre-experimental topic changes

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	49.889	.407		122.663	.000
	Pre-experimental metaphor present	3.528	.643	.584	5.486	.000
2	(Constant)	46.519	1.311		35.496	.000
	Pre-experimental metaphor present	3.194	.624	.529	5.122	.000
	Pre-experiment total linguistic markers	.334	.124	.278	2.691	.009
3	(Constant)	48.252	1.364		35.388	.000
	Pre-experimental metaphor present	2.313	.657	.383	3.520	.001
	Pre-experiment total linguistic markers	.372	.117	.310	3.175	.002
	Pre-experiment thesis paragraph	-.600	.204	-.314	-2.947	.005
4	(Constant)	48.049	1.326		36.227	.000
	Pre-experimental metaphor present	2.219	.639	.368	3.473	.001
	Pre-experiment total linguistic markers	.415	.116	.345	3.593	.001
	Pre-experiment thesis paragraph	-.588	.198	-.308	-2.973	.004
	Pre-experimental topic changes	-1.648	.778	-.199	-2.119	.039

a. Dependent Variable: Pre-experimental essay mark

Table 8.10: Step-wise Multiple Regression Analysis for Post-experimental Essay Scores:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.809[a]	.654	.648	3.44790	.654	109.625	1	58	.000
2	.860[b]	.740	.731	3.01605	.086	18.799	1	57	.000
3	.891[c]	.793	.782	2.71219	.053	14.487	1	56	.000
4	899[d]	.809	.795	2 63407	.015	4.371	1	55	.041

a. Predictors: (Constant), Post-experiment total linguistic markers

b. Predictors: (Constant), Post-experiment total linguistic markers, Post-experimental topic changes

c. Predictors: (Constant), Post-experiment total linguistic markers, Post-experimental topic changes, Post-experiment thesis paragraph

d. Predictors: (Constant), Post-experiment total linguistic markers, Post-experimental topic changes, Post-experiment thesis paragraph, Post-experiment metaphor present

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	40.547	2.056		19.718	.000
	Post-experiment total linguistic markers	1.261	.120	.809	10.470	.000
2	(Constant)	41.850	1.824		22.948	.000
	Post-experiment total linguistic markers	1.214	.106	.778	11.457	.000
	Post-experimental topic changes	-6.141	1.416	-.295	-4.336	.000
3	(Constant)	45.020	1.839		24.476	.000
	Post-experiment total linguistic markers	1.131	.098	.725	11.577	.000
	Post-experimental topic changes	-5.031	1.307	-.241	-3.850	.000
	Post-experiment thesis paragraph	-.716	.188	-.244	-3.806	.000
4	(Constant)	44.025	1.849		23.814	.000
	Post-experiment total linguistic markers	1.125	.095	.721	11.846	.000
	Post-experimental topic changes	-5.143	1.270	-.247	-4.049	.000
	Post-experiment thesis paragraph	-.575	.195	-.196	-2.948	.005
	Post-experiment metaphor present	1.529	.731	.133	2.091	.041

a. Dependent Variable: Post-experimental essay mark

Table 8.11: Enter Method Multiple Regression Analysis for Post-experimental Essay Scores, with Experimental Group factor added:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.928[a]	.862	.849	2.26072

a. Predictors: (Constant), GROUP, Post-experiment metaphor present, Post-experimental topic changes, Post-experiment thesis paragraph, Post-experiment total linguistic markers

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	60.440	3.944		15.325	.000
	Post-experiment total linguistic markers	.595	.142	.381	4.184	.000
	Post-experimental topic changes	-4.049	1.116	-.194	-3.627	.001
	Post-experiment thesis paragraph	-.750	.172	-.256	-4.369	.000
	Post-experiment metaphor present	1.283	.630	.111	2.037	.047
	GROUP	-4.731	1.041	-.410	-4.546	.000

a. Dependent Variable: Post-experimental essay mark