

## *Message Distribution and Content Analysis*

Using the message itself as a unit of analysis, the researcher first focus the number and trend of discussion postings during the term. Within that p  
tem has received 574 messages in total. Furthermore, the

王秀文 著

# 网络英语交互式学习研究

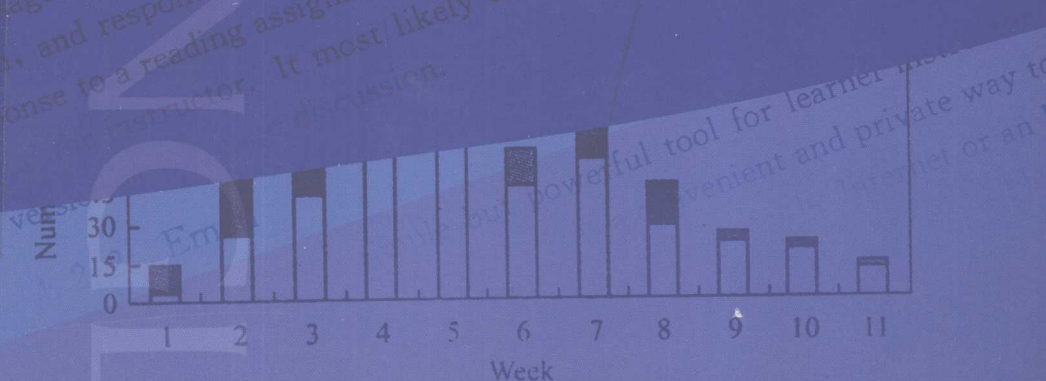
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## 4.2 Interaction tools used in

According to Driscoll (1998), there are many main in  
an asynchronous computer-mediated class including email, online  
forums, and hypertext media. A very brief overview of the too  
line course is as follows.

### 4.2.1 The discussion forum

An online discussion forum is an Internet Web page where learners can po  
messages, ask questions, brainstorm ideas, keep current with course inform  
tion, and respond to the writings of others. It can be used formally to post  
response to a reading assignment or informally as a way to converse with class  
the instructor. It most likely derived its name from the asynchronous



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# 网络英语交互式学习研究

王秀文 著

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## 内 容 提 要

本书在观察和分析基于网络英语教学中的交互式学习的基础上,采用定量分析与定性分析相结合,并辅以结构和内容分析的方法,探讨了基于网络英语教学中的交互式学习及其对学生学习效果的影响。本书以学习者为中心的社会建构主义为理论框架进行的研究表明,基于网络英语教学中的交互式学习有助于预测学生的学习结果,包括学生的满意度,感知学习以及学习动机。基于网络英语教学中的交互式学习,教师的角色得到了进一步的肯定,富有建设性的及时反馈被认为是相当有价值的。此外,本书还就如何促进基于网络英语教学中的交互式学习给出了一些建议和方法。

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## 前言

本书在考虑学生特点的前提下研究了基于网络英语教学(Web-based English courses)中的交互式学习及其对学生学习效果的影响。交互是教学的核心,然而基于网络教学过程中的交互式学习明显不同于传统教学中的交互式学习。为此,有必要系统研究网络条件下的交互式学习,描述其交互功能、交互模式、交互手段以及交互对于教学的作用和效果,以便对基于网络教学中的交互作一个较为清晰和全面的论述并能更好地了解交互式学习在基于网络教学中的作用,以推动日益发展的在线教育。

本书以学习者为中心的社会建构主义学习方法(learner-centered social constructivism approach)为理论框架,并运用一种描述性相关设计(descriptive correlated design)探索了交互及其与学生学习效果之间的关系。本书研究的交互种类包括指导性的交互(学习者与内容之间)和社会性的交互(学习者与教师之间、学习者与学习者之间的交互);学生学习效果是指对基于网络教学的满意度(satisfaction)、基于网络学习过程中的感知学习(perceived learning)和动机;学生特点是指性别、每星期用于网络课程的平均时间、选修网络课程的原因及计算机水平。

本书采用的数据主要来源于新视野大学英语(NHCE)网络学习环境问卷调查,也包括在线学习系统中存储的数据。如:学生登录的统计信息,以及班级讨论版上的留言等。与网络英语课程中的学生和教师的非正式面谈在数据收集的过程中也起了一定的作用。考查对象是选修了网络英语课程的上海交通大学外国语学院 288 名本科生。

本书所研究的问题为:在考虑学生特点的前提下,学生自我报告的交互水平是否有助于预测他们对于网络课程的满意度,以及他们在基于网络学习过程中的感知学习和动机?

本书采用相关分析和多层回归分析等定量分析方法回答了这一问题,并辅以定性分析以及结构和内容分析(structural and content analysis)作为进一步的补充和解释。

定量分析的效果说明预测学生满意度的三个重要因素都与交互有关,它们分别是:学生与学生之间的交互、学生与学习内容之间的交互以及学生和教师之间的交互。影响感知学习最重要的因素也与交互有关:首先是学生和学生之间的交互,其次是学生与学习内容之间的交互以及学生和教师之间的交互。影响学生动机最重要的因素既包括交互也包括学生特点:首先是学生与教师之间的交互,其次是学生与学习内容之间的交互,每星期用于网络英语课程的平均时间,学生与学生之间的交互。

本书的回归分析效果表明评价学生学习效果时,有必要同时考查学生特点和交互。这一分析效果说明在预测学生学习效果方面起主导作用的是基于网络教学中的交互而不是学生的特点;社会性的交互比指导性的交互更能预测学生学习效果;教师角色在交互中至关重要,及时反馈相当有价值。

定性分析以及结构和内容分析的效果不仅进一步补充和说明了定量分析的效果,而且研究还显示了一些与一般在线交互有关的其他效果。

本书将以学习者为中心的原则和社会建构主义的学习方法相结合,为基于网络教学实验性地提出了一种基于学习者的交互模型。该方法所运用的定性相关设计有助于理解基于网络教学中的交互;同时,选择使用个案研究,其多样化的数据收集和分析方法使多角度研究问题成为可能。本书既对教育者如何促进在线交互有所启示,又为研究者提供了一些可能的研究方向。

本书在笔者博士学位论文基础上增删修订而成。它是笔者近五年在网络辅助外语教学研究领域努力奋斗、刻苦钻研的一点学习心得。

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首先,衷心地感谢我攻读博士学位的导师、上海交通大学外国语学院郑树棠教授,是恩师指引我走上了英语学术研究之路。其次,要感谢上海交通大学众多的教授、朋友和同学,是他们让我的博士生活更有意义,使我的人生更加充实完整。

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最后,还要感谢我的家人李涛、张桂玲、李建南,好友汪运起、周文婷,以及我的研究生翁丽君等对本书提供的支持和帮助。

基于网络辅助外语教学方兴未艾,但对其的深入研究却很少,本书将从基于网络辅助外语教学中的交互式学习这一角度多方位地探讨基于网络辅助外语教学;成千上万的在校大学生(包括研究生和博士生)需要学术论文写作的具体范例,本书将为之提供良好借鉴。本书的阅读对象为对基于网络辅助外语教学感兴趣的高校教师、研究人员以及在校大学生(包括研究生和博士生)。

由于时间紧迫,资料有限,本书还存在很多疑问,期待与有识之士一起研究和探索。笔者期望拙著能抛砖引玉,引发大家对网络辅助外语教学的研究兴趣。

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2007年12月

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# Abbreviations

ALN	Asynchronous Learning Network
CALL	Computer Aided Language Learning
CBT	Computer-based Training
CMC	Computer Mediated Communication
CSCL	Computer-supported Collaborative Learning
DE	Distance Education
EFL	English as a Foreign Language
HTML	Hypertext Markup Language
LCPs	Learner-centered Principles
MOO	Multi-user Domain Object Oriented
NCES	National Center for Educational Statistics
NHCE	New Horizon College English
PC	Principal Component
URL	Uniform Resource Locator
WBI	Web-based Instruction
WBLT	Web-based Language Teaching
WWW	World Wide Web
ZPD	Zone of Proximal Development

This list includes those abbreviations adopted from the works of cited authors.

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# Chapter 1 Introduction

Internet education is now an established phenomenon and a growing industry. While Web-based courses were a rarity only a decade ago, they have become an accepted means of providing higher education, and their popularity is increasing. In 1999 at least 1.5 million Internet courses were available through 3,000 different institutions, and by 1999, two-thirds of accredited 4 year and graduate universities offered courses via the Internet.

It can be seen that colleges and universities are striving to have the most effective educational programs that encourage a dynamic combination of being flexible, individualized, personally and professionally challenging. As Web-based courses become a necessity and a trend, both educators and their learners are raising important instructional questions about the quality of these computer-mediated educational programs. A vital academic question involves the interaction that occurs during online teaching and learning process. Educators are wondering whether the online format will provide high quality of interaction that is a vital element in the learning process.

## 1.1 The importance of interaction

Interaction has long been thought of as a critical predictor when the success of an educational environment is determined, whether it is in traditional classroom setting or in the online learning platforms. Interaction is an important element for effective learning and exchanging information. According to Moore and Kearsley (1996), one important component that may influence students' success in completing a distance education course is the degree of interaction that is possible. Interaction is central to the social expectations of education in the broadest sense and is in itself a primary goal of the larger educational process.

Further justification for the need for interaction in an online environment is presented in an article written by Wagner (1998) in which twelve outcomes that learners are to obtain as a result of interaction are identified. These twelve out-

comes demonstrate the need for successful online interaction. Some of the outcomes are: interaction for participation, communication, feedback, elaboration, learner control/self-regulation, motivation, negotiation, team-building, exploration, and closure.

The degree of interaction that is required of learners varies from none at all to a high level that is essential for learning to occur. Some learners have developed independent learning strategies, which may require little or no interaction with a teacher. Other learners require the motivation and structuring of learning that a teacher can provide through interaction.

## **1.2 Statement of the problem**

The problem is that the interactions between students and the learning content, students and instructors, students and their peers are very different in Web-based courses and traditional classroom setting.

In traditional classrooms, students interact with course content mainly through textbooks. In addition, instructors can select technological tools such as the Internet or specific Web pages of lecture notes or class syllabus, to argument learning course content. In contrast, the use of electronic tools is not an option, but rather a necessity, in a Web-based course. In the Web-based environment, the content of interaction may include those found in the traditional classroom; however, much of the content is generally delivered in the form of hypermedia text.

In traditional classrooms very often, learner-instructor interaction occurs in a face-to-face, physical meeting. In the Web-based course, this type of interaction usually must be transmitted by electronic means, such as forum discussions or electronic mail (email) communications.

In traditional classroom courses, students may interact in person and through electronic means. Students may communicate during class or schedule meetings outside the normal class hours. Students may also communicate through telephone or email. Although the same venues for interactions can be used by students in Web-based courses, doing so may be cost prohibitive. The time/place limitation may necessitate the need to conduct group projects through online discussions, chat rooms, or email messages.

Therefore, an important facet to develop a Web-based course is the effective incorporation of interaction opportunities. The ideal Web-based courses need to be designed to promote interaction so as to stimulate classroom and improve learning outcomes. Because of the proliferation of Web-based courses, the differences in interaction between the traditional and Web-based pedagogical platforms, and the controversies as to what interaction is and how interaction affects student outcomes in Web-based courses in the existing literature, a vital need exists to examine interaction and its effectiveness in Web-based courses .

### 1.3 Purpose of the study

The purpose of this study is to give a better understanding of the interaction in Web-based courses and the role of interaction in language teaching and learning so as to facilitate the development of online instruction on campus and provide more opportunities for interaction. Although interaction has been characterized as an important construct in distance learning, little existing field research has been undertaken to provide a clear, overall description of it. Also there are controversies as to how interaction affects student outcomes, especially with learners as the focus of learning in Web-based instruction. Therefore, this study has examined the interaction in Web-based courses and its effect on student outcomes with student characteristics being considered. The study is guided by the following research question:

*What is the effect of interaction in Web-based courses on student outcomes of satisfaction, perceived learning, and motivation with student characteristics being considered?*

The primary aim cannot be achieved until two subordinate aims are reached. These two aims are:

(1) Establish support for the construct validity of the interaction dimensions.

Dimensionality has been assessed by performing factor replication using the double-factoring procedure (Gorsuch, 1983).

(2) Assess reliability of interaction dimensions by examining internal consistency.

A learner-centered social constructivism approach has been adopted as the

theoretical framework guiding the research. The study is basically descriptive in nature and has offered a case study using data from student evaluations of a Web-based English course—*New Horizon College English (NHCE)*. A major emphasis of this study is laid on the importance of student characteristics in the data analysis so that a stronger claim can be made about the effect of interaction on student outcomes. The statistical instrument used in the study is SPSS version 12.0 for Windows (SPSS 2003).

## **1.4 Background**

Three theoretical perspectives have successively influenced how computer technology has been used in language teaching, i. e. structural, cognitive, and socio-cognitive, among which socio-cognitive perspective parallels developments in technology of the networked computer.

### **1.4.1 Socio-cognitive perspective**

American sociolinguist Hymes views language as a social and cognitive phenomenon. He coins the term communicative competence to respond to Chomsky's mental characterization of linguistic competence (Hymes, 1971). During the 1980s, communicative competence became the buzzword of the language teaching profession. The essence of communicative competence is interaction as far as language teaching and learning is concerned.

With interactive communicative language use gaining popularity, communicative processes have become as important as a linguistic product, and instruction has become more learner-centered and less structurally driven. In a socio-cognitive approach, learning is viewed not just in terms of changes in individuals' cognitive structures but also in terms of the social structure of learners' discourse and activity (Crook, 1994). From this perspective, language instruction is viewed not just in terms of providing comprehensible input, but rather as helping students enter into the kinds of authentic social discourse situations and discourse communities that they will later encounter outside the classroom. Some maintain this is to be achieved through various types of task-based learning in which students are engaged in authentic tasks and projects. Others emphasize content-based learning in which students learn language and content simultaneously.



### 1. 4. 2 Socio-cognitive approaches to computer-assisted language learning (CALL)

Socio-cognitive approaches to CALL have shifted the dynamic from learners' interaction *with* computers to interaction with other humans *via* the computer. The basis for this new approach to CALL is closely bound up with both theoretical and technological developments. Theoretically, there has been broader emphasis on meaningful interaction in authentic discourse communities. Technologically, there has been development of computer networking, which allows the computer to be used as a vehicle for interactive human communication.

Computer networking in the language classroom stems from two important technological (and social) developments: ① computer-mediated communication (CMC) and ② globally linked hypertext.

#### 1. 4. 2. 1 Computer-mediated communication (CMC)

Computer-mediated communication (CMC) has existed in primitive form since the 1960s, but its use has become widespread only since the late 1980s. CMC allows language learners to communicate with other learners or native speakers in both asynchronous and synchronous (simultaneous, in real time) modes by network. Such tools as email, chat room, MOO (multi-user domain object oriented) allow not only simultaneous but also asynchronous conversation, and permit both one-to-one and one-to-many communication. So the teacher or student can share a message with a small group, the whole class, a partner class, or an international discussion list involving hundreds of people. They can share not only brief messages but also lengthy documents, vivid flashes, films, and so on. Activities using the Internet promote collaboration in reading, writing, listening, and oral English.

#### 1. 4. 2. 2 Globally linked hypertext and hypermedia

Globally linked hypertext and hypermedia is a new medium for organizing, linking, and accessing information. It has three outstanding features;

(1) Integration of graphic, audio, and audiovisual information together with texts.

The World Wide Web (WWW) offers abundant information resources,



through which students can search millions of files around the world to access authentic materials e. g. , newspapers, magazines, radiobroadcast, videos and movie reviews.

(2) Easy and low cost of international publication.

Students can also use the Web to publish their texts of multimedia materials to share with partner classes or with the general public.

(3) Rapid global access.

Using the WWW, students can search through millions of files around the world within minutes to locate authentic materials.

The very existence of networked computers creates possibilities for new kinds of communication and serves as a source of authentic materials. Since the goal is to help students enter into new authentic discourse communities which are increasingly located online, and are appropriate to incorporate online activities for students' social utility.

#### 1. 4. 3 Web-based language teaching (WBLT)

WBLT is one form of CALL, which is language teaching that involves the use of computers connected to one another in either local or global networks. Whereas CALL has been traditionally associated with self-contained, programmed applications such as tutorials, drills, simulations, instructional games, and tests, WBLT represents a new and different side of CALL. In WBLT, human-to-human communication is the focus. Language learners with access to the Internet, for example, can now potentially communicate with native speakers (or other language learners) all over the world at any time regardless of where they are. Learners can communicate either on a one-to-one or a many-to-many basis in local-area network conferences further multiplies their opportunities for communicative practice. Finally, since computer-mediated communication occurs in a written, electronically archived form, students have additional opportunities to plan their discourse and to notice and reflect on language use in the messages they compose and read.

### 1. 5 Web-based courses

Considering the study of interaction and its effect is within the boundary of