An Empirical Study of Multimodal Learning Mode in College English

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Abstract: This paper explores a multimodal learning mode assisted by multimedia learning center and multimodal classroom instruction based on Multimodal Discourse Analysis. An experiment on multimodal learning mode was conducted in college English by using tests, questionnaires and semi-structural interviews throughout two terms among 153 students. The statistical results indicate that this learning mode proves to be effective in improving students' linguistic competence and multi-modal communicative ability. The purpose of the study is to provide empirical evidence for this model of teaching that promotes students' multimodal meaning-making ability, multiliteracy and initiative in English learning.

Introduction

Modern communication has been distinguished by a diversified meaning construction in which a variety of modes coordinate to convey information. With the rise of multimodal discourse analysis and the application of multimedia and network information technology in higher education, the dimension of language learning has been expanded a great deal in a multimodal communication environment. In this new situation, students' ability to communicate by means of both language and non-language symbols has to be cultivated to meet the need of worldwide cultural diversity and communicative multimodal development. Therefore the author purposefully reformed the traditional English teaching and conducted a multimodal learning mode facilitated by multimedia learning center and multimodal classroom instruction.

Literature Review

Multimodality and Multimodal Discourse Analysis

Multimodality refers to the combination of different semiotic modes [1]. It has attracted the attention of linguists worldwide. A multitude of researchers have yielded abundance of research on multimodal discourse analysis. Kress and Van Leeuwen first put forward the concept of multimodal discourse and constructed visual grammar [1]. They extended the concept of modality to image and discussed the relationship between modality and media [2]. O' Toole first proposed audio-visual language teaching methodology and explored the "grammar" of the visual arts and proposed that viewers simultaneously read three different kinds of meaning: what is represented, how it engages us and how it is composed [3].

Their research mainly illustrates the multimodal discourse analysis theory based on systemic functional linguistics and focus on various genres like visual images, color, classroom, architecture, mathematical symbols to decode the power of multimodal discourses in our life.

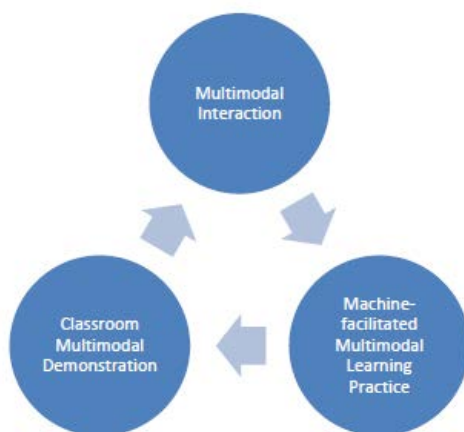### Multimodal Discourse Analysis in Pedagogy

Multimodal discourse analysis in language teaching derived from New London group who proposed the priority of developing students' multiliteracy and multimodal meaning construction in language teaching [4]. Later then an increasing research findings on multimodal discourse analysis in education have been arising. Kress discussed the relationship between modes and media in modern communication [5,6]. Royce studied the synergy between modalities in language teaching

classroom [7]. In China LI, GU, Hu, are the pioneers in studying multimodal discourse analysis [8,9,10]. In recent years more researchers have explored the synergy between modalities in language teaching classroom[11], the effect of multimodal PPT presentation[12,13,14], and the construction of multimodal teaching[15,16].

It can be concluded from their study that an individual mode is far from satisfying for meaning construction and language learning in modern world. However with more works on one aspect of teaching there has been less focus on students' learning mode based on multimodal discourse analysis. Therefore, this paper attempts to explore a multimodal learning mode constructed in a multimodal learning environment. An experiment was conducted in college English course to examine the efficacy and feasibility of the new learning mode.

The Construction of a Multimodal Learning in College English

Graph1. Multimodal Learning Model in College English

The model above (Graph1) is a circulation of multimodal environment contributed by three modules. Module1, classroom multimodal demonstration, refers to demonstration and feedback between teachers and students in classroom. Module2, multimodal interaction, indicates language learning practice via multimodal communication among teachers and students. Module3, machine facilitated multimodal learning practice, refers to independent or group learning in multimedia classroom. The most distinctive feature of this learning model is the multimodal environment for students' learning experience. Multimodality modifies each aspect of this learning experience including learning content, classroom interaction and evaluation. Firstly, for learning content, the teacher explores the resources from textbooks, audio-visual data, and internet to construct a diversified meaning construction environment. For example, for topics like "food" the teacher applies olfactory and gustatory modality for students to associate English with the material objects intuitively. With regard to abstract or complex topics as "technology and happiness", the teacher draws upon thinking map for students to demonstrate their thinking line with markers. With full use of visual, auditory, tactile, olfactory and gustatory modality, students' enthusiasm in learning English is aroused thoroughly. Secondly, multimodality is best exemplified with diversified classroom interaction. Even on abstract topics, the application of multimodalities can create an active and dynamic classroom atmosphere. Additionally, multimodality embodies in every step of evaluation including formative assessment and summative assessment. Coordination of language and non-language modalities in effective communication will win bonus points in the routine records of students' performance in classroom interaction, report, and presentation. For summative assessment, the practice of multimodalities to construct meaning is clarified as one of the criteria in oral test. In this way, desirable effect can be exerted by the great backwash effect of the evaluation through students' learning process.

The following graph is a learning design for sophomores. A wide diversity of modalities run through each section of students' learning process in which a sense of multimodal communication is emphasized and cultured. After a few weeks learning practice, students' enthusiasm and initiative got fired. They competed to demonstrate and share their works in class. In contrast to the passive role of students in traditional teaching model, this model triggered students' initiative. It transformed the traditional teacher-fronted teaching into active students-centered learning experience and made it possible to enhance students' linguistic competence and multimodal communicative competence

Graph 2. Learning Design of New Horizon College English Book3 Unit4

Phases of Learning	Content	Multimodalities
Classroom Demo	1.Demo of multimodal PPT from teachers or students	Pictures, animation, color and layout of words, images
	2.Teacher's or students' speech	Gestures, eye contact, pitch of voice
Multimodal Communication	1.Explicating the meaning of family by telling the story from the animation video.	Animation, image, sound, color,
	2.Mind mapping different types of families in a group	Drawing, mapping, color, arrow marks
	3.Jigsaw playing on nuclear family in decline in China	Colored marking, layout of key information
Facilitated Multimodal Learning	1.Video watching and discussion: *when I knew my parents split up*	Changing mood reflected on the face of the interviewee including frowning, hesitating moving of eyeballs, head moving, shrugging, blinking, beaming.
	2.Survey and report: should parents split up when they don't love each other any longer	Gesture language, tone of voice, eye contact, pictures, videos, images, chart, graph, color, sound, etc.

Empirical Study

Purpose

The paper attempts to explore the following questions. Firstly, is it more effective to enhance English learning in a new multimodal learning mode? Secondly, how does students' language skills and multiliteracy get evolved in this model? Thirdly, is it conducive to arousing students' interest and confidence in learning English?

Subjects

The subjects were 153 first year non-English majors from Huazhong agriculture university. According to the test performance in band 2 final examination, students of the same level were divided into experimental group and control group as shown in table 1. The statistics indicated that there was no significant difference in linguistic performance between the two groups ($p=.814 > .01$).

Table 1. Pretest Scores of the Subjects

Group	Number	Average Mark	Std. Deviation	T	P
Experimental group	153	76.6993	9.34048	.235	.814
Control group	154	76.9740	11.05524		

Instruments

The instrument includes a band 2 test, an oral test, a band 4 test from CET 4 and a questionnaire. In the questionnaire there are altogether 16 questions focusing on students' evaluation of college English learning on a five-point Liker Scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree).

Procedure

The experiment initiated at the beginning of the second term. Both groups shared the same textbooks and class hours. What distinguishes experimental group from control one was the multimodal learning environment through their learning experience. After one year experiment, their performance in both oral and paper test was recorded and compared to reveal any distinction resulted from the different learning models.

Results and Discussion

As reflected in table 2, the average mark on overall performance of the experimental group exceeds that of control group with statistical significance (p=.0006 < .01). Apart from that, the standard deviation of experimental group were largely reduced from pretest to posttest(9.34048→5.99218), which indicated gaps between students in experimental classes had been shortened. These statistics reveals that the new learning mode has exerted positive effect on students' English learning especially by bridging the gaps between students of different proficiency. Compared with the teaching approach with only language as the sole modality, the new model led to a more vivid and appealing class, far more motivated students, thus more desirable learning outcome.

Table 2. Posttest Scores of the Subjects

Group	Number	Average Mark	Std. Deviation	T	P
Experimental group	153	75.8856	5.99218	-2.802	.0006
Control group	154	71.1039	10.75601		

In view of multimodal communicative skills, a video record of students' performance in oral test is reported in the following table (table 3). Most of the students in the experimental group had a strong sense of using non language modalities and coordinated them in their English output. In contrast, students in the control group seldom used non language modalities. What's worse, many a student kept a looking in the teachers' eyes while talking to their partners. Some students even stared at the ceiling or floor with almost no other gestures as if they were reciting something prepared beforehand rather than communicating with their classmates. The obvious distinction of performance between students from two groups demonstrated the effectiveness of the new learning mode in developing students multimodal communicative competence.

Table 3. A Comparison of Multimodalities in Oral Test

Groups	Percentage of multimodalities in oral production (%)			
	Tone of voice	Eye contact	Other gestures (head moving, frowning, shrugging.)	Pictures, images, drawing, etc.
Experimental group	90	98	80	83
Control group	4	3	2	0

A first-hand evaluation of the adopted learning mode from the subjects was conducted afterwards. The data (table4) reflects that students approves of and have benefited from the new learning model. Almost 100% students in experimental group approve the necessity of multimodal instruction in language learning class and are determined to take advantage of diversified semiotic resource in their future work. On the contrary, only a few students (2%; 5%) in control group have certain sense of multimodalities though 63% of them believe these resources can arouse their interests.

Table 4. Students' Feedback of the New Learning Model

	Experimental group	Control group
It can better satisfy language class to use multimodalities rather than language form.	1.-0% 2.-0% 3.-2% 4.-12% 5.-86%	1.-0% 2.-8% 3.-85% 4.-5% 5.-2%
Images, pictures, audio-visual materials can better arouse my interests in English learning.	1.-0% 2.-0% 3.-0% 4.-0% 5.-100	1.-0% 2.-% 3.-37% 4.-35% 5.-28%
I'll take advantage of different modalities to in my future study and work.	1.-0% 2.-0% 3.-0% 4.-0% 5.-100	1.-0% 2.-15% 3.-70% 4.-10% 5.-5%

Conclusion

In the multimodal learning model, the teacher coordinated the relationships of diversified modalities to create a multimodal environment where students had acquired a clear sense of multimodal communication and been aroused an enthusiasm in English learning. In consistent with the finding in the research of Zhang, Li, and Zeng[13,15,16], the present study verifies the efficiency of the multimodal learning mode. What's more, students' initiative in using different multimodalities were promoted and multimodal communicative competence were enhanced as a result. Additionally, the favorable evaluation from the students proves the feasibility of the multimodal learning mode.

But it is also suggested that multimodalities be used properly to prevent students from getting distracted. As elements of the diversity of communicative approaches in society, languages, images, sound and actions are systemic and multifunctional. The core role in language learning is still text linguistic system. It is not supposed to be replaced by other semiotic systems but is destined to be facilitated by the coordination of multimodalities. How varied modalities get harmonized in foreign language learning is an issue worth exploring in practical teaching and learning in the future.

References

[1] Kress,G., van Leeuwen, T. Reading Images: The Grammar of Visual Design. Routledge, London,1996.

[2] Kress, G. & Van Leeuwen, T. Multimodal Discourse: The Modes and Media of Contemporary Communication. Arnold, London, 2001.

[3] O' Toole, M. The Language of Displayed Art. Leicester, London, 1994

[4] New London Group. A Pedagogy of Multiliteracies: Designing social futures. Harvard Educational Review, 66(1) (1996) 60-93.

[5] Kress, G., Jewitt, C. Ogborn, J. & Tsatsarelis.C. Multimodal Teaching and Learning: The Rhetoric of the Science Classroom. Continuum, London, 2001.

[6] Kress, G., Jewitt, C. Bourne, J., Franks, A., Hardcastle, J., Jones, K., & Reid, E. English in Urban Classrooms-A Multimodal Perspective on Teaching and Learning. Routledge, London & New York, 2005.

[7] Royce,T.Multimodality in the TESOL classroom: Exploring visual-verbal synergy. TESOL QUARTEIILY, 36 (2002) 191—206.

[8] Zhan-Zi LI. Social Semiotic Approach to Multimodal Discourse. Foreign Language Research, 81(5) (2003) 1-8.

[9] Yue-Guo GU. On Multimedia Learning and Multimodal Learning. Computer-Assisted Foreign Language Education, 114 (2007) 3-12.

[10] Zhuang-Lin HU. Multimodalization in Social Semiotics. Language Teaching and Linguistic Studies, 1(2007) 1-10.

[11] De-Lu ZHANG. Multimodal Discourse Analysis and Media Technology in Foreign Language Teaching. Foreign Language Education. 4 (2009) 15-20

[12] Zhuang-Lin HU. How Is Meaning Constructed Multimodally-A case study of a PowerPoint presentation contest. Computer-Assisted Foreign Language Education.109 (2006) 3-12

[13] Zheng ZHANG. A Co-relational Study of Multimodal PPT Presentation and Students' Learning Achievements. Foreign Languages in China. 35 (2010)54-58

[14] Zheng ZHANG. The Correlation between Multimodal PPT Presentation and Students' Learning Attitude. Computer-Assisted Foreign Language Education.151 (2013) 59-64

[15] Bao-Hong LI, Pi-an YIN. An Empirical Study on New Model of College English Teaching under the Context of Multimodality. Computer-Assisted Foreign Language Education. 148 (2012) 72-75

[16] Qing-Min ZENG. The Efficacy of Multi-modal Teaching on the Development of L2 Listening and Speaking Abilities. Journal of PLA University of Foreign Languages.6 (2011)72-76