

Validity of Multimodality in Autonomous Learning of Listening and Speaking*

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Abstract—This paper investigates the validity of multimodality in non-English majors' autonomous listening through an experimental study. The experiment examines two groups. The experiment group learned English listening through multimodality both in class and after class, when autonomous learning was instructed and practiced. The control group is exposed to sound alone, which has been the traditional teaching and learning method of English listening for many years in college. Tests, surveys and interviews were conducted and the results were analyzed. The results indicate that multimodality could boost students' autonomous listening significantly and improve their comprehension, as well as multiliteracy capacity.

Index Terms—multimodality, listening comprehension, empirical study

I. BACKGROUND INTRODUCTION

A. *Multimodality Theory and Practice*

The concept of multimodality teaching is a new term suggested by the New London Group in 1996. As a new teaching theory, it advocated the integrating of a variety of channels and teaching methods, including the Internet, pictures, and role-play etc. into rousing multiple senses in language learning. It emphasized the cultivation of learners' multiliteracy capacity. With this teaching approach, the teacher could effectively make use of multiple modalities to gain, deliver and receive messages.

This approach has been receiving more and more attention and confirmation in recent years, both home and abroad, and there are many research findings on multimodality teaching theory, practice, class design, as well as the application of combining multimodality and specific teaching of language, such as writing, reading, listening and so on. For example, Hu Zhuanglin(2007) holds that traditional reading and writing are not enough in this era of multimedia, and with more and more multimedia facilities appearing in classrooms, the whole education is being multimodalized. Zhang Delu(2009)says that multimodality discourse refers to the phenomenon of communicating by applying a variety of feelings such as hearing, seeing and touching, through multiple methods and signal resources, such as listening, images, sound, actions and so on. Zeng Qingmin (2011) had a research on the application of multimodality discourse analysis theory into college English teaching, and found it more effective and had different effects on students of different English levels.

B. *Theories and Practices on Autonomous Learning*

Arguments and practices on the concept of autonomous learning began in 1981, when Holec had his work *Autonomy and Foreign Language Learning* published. From then on this concept has become a hot topic in language teaching field. In recent years, a lot of Chinese scholars have done a lot of study, analysis and practice and made plenty of achievements in this aspect. Many of them combined autonomous study with the teaching of listening and did research with outstanding findings, which proves that autonomous learning of listening is quite feasible. For example, Yu Senlin (2008) believes that the cultivation of autonomous listening abilities can enhance other aspects of the students' autonomous learning abilities, and as a result, their whole-life learning abilities and self-development will be benefited a great deal in the future. Zhu Xiaoshen (2011) probes into the implementation of autonomous learning of College English listening in the web environment.

Autonomous learning has already been widely accepted by both teachers and students in today's college English teaching and learning. It is especially advocated in the practice of listening. To make autonomous learning of English listening more interesting and effective, plenty of attractive audio and audio-visual materials in today's Internet environment could be of great help. With the popularity of multimedia devices in colleges, it seems natural that multimodality teaching be applied into facilitating autonomous learning.

C. *The Integration of Multimodality and Autonomous Learning*

At present, although there are various researches on multimodality and autonomous study respectively, the combination of the two aspects are comparatively hard to find. Li Xin (2012) had an empirical study on the validity of

* This article is supported by the 2014 College English Teaching and Researching Project of Foreign Language Teaching and Research Press. The project number is 5295.

multimodality teaching pattern of autonomous listening, which found that this pattern could effectively improve the students' listening and multiliteracy ability. However, this research was based on classroom teaching without exploring after-class learning and it was on English majors only. Wang Yuwen (2009) had a research on multimodality autonomous listening and made a detailed design and stated the monitoring method of students' learning on the Internet. Her research was based on the E-learning system and whose experiment objects were post-graduates only.

The author found that thorough studies in this area on non-English majors in college are by far far from enough, but the number of students is quite large. To them, English is a required course which is given at most 4 hours of class each week. To learn a foreign language well in such short period of time is not enough. Therefore, autonomous learning in their spare time is quite essential for them to effectively improve their English level. They urgently need instructing and better methods to make full use of the rich materials easily accessible with a simple click of the mouse.

II. THE ORIGINALITY OF THIS RESEARCH

Different from previous studies, this research was an empirical study about the practicing of autonomous learning of English listening through multimodality teaching pattern among non-English majors. This research was supported by an experiment with the support of three teachers and four classes of non-English majors. They committed to the instructing and carrying out of the instructions to learn respectively, worked very hard with discipline for a whole term, and they both reaped the benefit of their hard work.

The present college English teaching purpose is to improve the students' listening and speaking ability, and at the same time strengthen their autonomous learning ability. Under this background of college English teaching reform, this research focused on the application of multimodality teaching pattern to cultivate students' autonomous learning both in and out of class, the purpose of which was to improve their listening and speaking capacity and promote their comprehensive application of English. Experiments, surveys and interviews were conducted to explore the validity of this approach.

III. THE EXPERIMENT

A. *Main Content of This Research*

Multimodality autonomous learning is an open teaching approach, which is also the extension of the classroom teaching and learning. The aim is to strengthen and enhance the content of classroom teaching, satisfying students' individual demands. According to the teaching requirements, learners could learn how to interactively listen according to their own listening level and through their accustomed methods. They could learn by integrating sight, hearing, touching and learning resources of multimedia listening in the Internet environment. These resources include sound, video materials and their corresponding scripts. They should make and revise their studying plans and finish the assignments autonomously within required time limits and choose whether to make addition to their listening materials according to their studying requirements.

This research integrated multimodality teaching theory, teaching theory of listening class, autonomous learning theory and after-class study. It is a comprehensive integrity of class teaching and after-class study. Meanwhile, it checked how the students accept and support this pattern and concluded the strengths and weaknesses of applying it. A Specific performance of the experiment as well as the data and the result of data analysis will be stated here. A survey as well as an interview will be conducted to examine whether this pattern is valid.

B. *The Objective of the Research*

This research was done with the aim of breaking traditional teaching pattern of listening and speaking class, taking students as the real center of learning and cultivating their ability to learn autonomously and confidently.

Questions to be answered by the experiment are as follows:

- 1) Will multimodality teaching boosts students of non-English majors' autonomous learning of listening, speaking and their multiliteracy capacity?
- 2) What are the advantages of pictures and videos as well as their captions in listening comprehension?
- 3) Is writing or taking notes helpful in promoting listening and speaking ability?

C. *The Process of the Experiment*

1. Choosing objects for the experiment

Two classes of science and two classes of arts from non-English majors were chosen as the experiment group. To this group experiment was conducted. Two other classes of science and another two of arts from non-English majors were chosen as control group. According to the college entrance examination grade, the English levels of these eight classes were very close; almost the same.

To both the experiment group and the control group, two tests were conducted, one at the mid-term, which was about two months from the beginning of the experiment, and the other at the end of the term, which was about four months from the beginning of the experiment. A survey was conducted at the end of term with the students in the experiment group. The results from both the exams and surveys were analyzed and compared. According to the results, some

students from both groups were chosen to be interviewed.

2. The training of students

2.1 The teacher experienced multimodality learning together with the students in class, making students the center of class so as to boost their comprehensive capacity of being the center. They learned how to deal with the various materials and learned effectively from them. Most importantly of all, they learned the necessary disciplines, as well as how to take charge of time and use it scientifically in order not to concentrate and get distracted by the temptations online.

The arrangement of materials and the division of time are as follows:

Types of materials	audio	Audio-visual	Text reading	speaking	writing
Time arrangement (minutes every day)	15	20	10	10	5

Students should spend at least 60 minutes every day and distribute them as required. The texts should be related to the audio and audio-visual materials. And the texts should be read after they have listened to or watched these materials.

2.2 To get the students prepared for autonomous learning psychologically and methodologically, they were trained for cognitive and metacognitive strategies, as well as their language sensitivity and language learning.

strategies	Description of the strategies	Questions to be answered by the students after being explained by the teacher
Meta-cognitive strategies	Self-evaluation by the students	1. Could you learn English well through your own hard work?
		2. Could you make sure such time is spared to concentrate on learning listening in your spare time each day?
		3. Which is the weakest part of your English capacity, listening, speaking, reading or writing?
		4. Do you think you could improve your listening and speaking by yourself?
	Self-consciousness	5. Do you want to be the center of class and be more active both in your own learning and responsive to the teacher's instruction?
	Self planning by the students	6. Do you want to accept the learning plans and do you think they are beneficial to your English learning?
		7. Do you want to be cooperative and reflective in the complementing of your plans?
		8. Do you think you are essential in improving your English level?
	motivation	9. Do you think your English teacher is important for you to learn English well?
		10. Do you work hard to learn English well in order to pass different types of exams?
		11. Do you want to learn English well just to find a good job?
cognitive strategies	speaking	12. Are you willing to talk with your partner about what you listen to or watch?
	writing	13. Can you persist in writing journals every week?
	Listening and watching	14. Do you want to listen to and watch the required materials?
Social strategies	cooperation	14. Do you want to be cooperative with the members in your group?
	Willingness to participate	16. Do you want to be active in class and be brave to ask and answer questions?
		17. Do you think being cooperative with your group member could boost your speaking and learning?
The wanting of interference from authority	18. Do you think the autonomous learning after class needs the teacher's interference and instruction?	
Multimodality teaching and learning	Agreement of multimodality learning	19. Do you want to accept this method and try to adapt to it as soon as possible?

These questions were answered one by one after being explained by the teacher. This is both a general understanding and a training of the students' cognitive and meta-cognitive strategies. It could help the teacher to better know their students and at the same time remind the students to know themselves better.

The result can be summarized as follows: 1) The students of the experiment group agreed to be cooperative and be active both in class and after class. Although some of them were not sure or confident at first, they agreed after the teacher's explanation and promise that this is essential to learn a language well, and that it is crucial for the success of the experiment. 2) They promised to spare one hour every day and divide the time as required. 3) They promised to monitor each other and stay focused on the learning materials assigned by the teacher, not get distracted by online games, movies, novels or other temptations.

2.3 Establishing plans (or signing learner contracts): taking into account of their individual listening levels, interests and demands, etc., students set their objectives for study, limited the learning contents, making their learning schedules, setting objectives within a short term. They also chose and decided their learning methods and skills, and wrote a feasible plan.

According to the plan, students listened to or watched abundantly the discs provided by the textbooks or materials they chose from the Internet, radio, language labs, borrowed or bought by themselves or provided by the teacher.

2.4 The carrying out of the plan: The teaching and learning process was divided into three stages: pre-listening, listening or watching, and post-listening. In each stage, methods and strategies students should get prepared and took include: prediction, taking note, writing comments, dictation, and regular oral report, etc. all of which were instructed by the teacher and enhanced through practice many times.

The following is a specific example of the learning and teaching process according to the three stages. The material taken is a piece of video clip about going to parties and how to have small talks.

1) Pre-listening: The students were instructed to go over the new words from the video. From these words and the title and questions asked, the students were asked to predict what this video might be about. All predictions were encouraged although some may be far from what they are going to hear, because the prediction process will boost the brain activities, elements relating to the topic will arise in the conscious and subconscious mind.

2) Listening and watching: The students were asked to watch the video for two times without showing the caption, and then do the exercises and check the answer. After that, they read the script of the caption. It is a conversation between the doctor and Walter, who are friends. Walter is going to play Santa for the children in the orphanage, but he is very nervous and Doctor is trying to give him some advice and encouragement. In the short clip, there are three elements that are funny and should make the audience laugh at least several times. But these elements are difficult for the students to understand.

The first one is the speech that Walter prepared for the kids, which is like a formal speech for a group of adults.

The second is when Doctor shows with his body language that this speech is not proper, while Walter’s response is “I know, I know. Too formal.”

The third is Walter’s response when he found Doctor’s hesitation at one of his presents prepared for the kids, a pack of beef, “I should've bought pork.”

These humorous points may not be spotted by the students when they watch the video because of the listening capacity. The teacher reminds them to talk about these points and ask them to think about the meaning between the lines.

At last, the students were asked to watch the video again. Then listened for another two times with the caption on.

3) Post-listening: The students were asked to reflect on the video, and write in their notebooks about their understanding of how to make a small talk and what is wrong with Walter’s planning of what to say to the kids. Then they were asked to talk with their partner about the video’s content and imagine what they would say and what presents they would prepare if they were Walter and what suggestions they would give Walter if they were Doctor.

The teacher could go one step further by asking the students to write down or talk about one of the most unforgettable small talk they have made or have heard or read. They could also talk about their experience of choosing the wrong presents for friends or relatives.

The students’ senses of sight, hearing, touching, smelling and tasting etc. were fully put into practice. Besides in class, every time they practice listening in their spare time, they wrote down a little note about what they listened to or watched and what they feel about what they have listened to, had group discussion, reported to their groups by summarizing their study and benefits, realizing the objectives of multiliteracy.

3. Findings of the experiment

A variety of research instruments were adopted: Surveys were conducted to both teachers and students, while students were tested and interviewed regularly and quantitative analysis was done with the results.

For a whole term, the experiment group was learning as described above, while the control group was learning with the traditional method. Their textbooks are the same and were in the charge of the same teacher. They were both tested by the same papers in the middle of the term in November, 2014, and at the end of the term in January, 2015. The average grades of four aspects in both exams are listed as follows:

Grades of the two groups in November, 2014 and January, 2015 respectively.

groups	class	L1	ave.	L2	ave.	S1	ave.	S2	ave.
Experi-g roups	one	14.2	14	15.9	16	15.3	15.4	16.2	16.4
	two	13.8		16.1		15.5		16.6	
Control groups	one	13.5	13.4	13.8	13.6	14.9	14.8	15.0	15
	two	13.2		13.4		14.7		14.9	

(Notes: L=Listening grades, the full mark is 20 points; S=Speaking grades, the full mark is 20 points; R=Reading grades, the full mark is 20 points; W=Writing grades, the full mark is 20 points; 1=the first exam in October, 2014; 2=the second exam in January, 2015; ave.=average points)

From the table above we can see that in both the first and the second exams, the experiment group made obvious progress in both listening and speaking, the improvement is 2 points in listening and 1 point in speaking. While the control group’s improvement was only about 0.2 in both the two aspects.

The difference in the grades between the two groups is obvious. For the first exam, the grade of the experiment group is 0.6 point higher while 2.4 points higher respectively in listening. In speaking, in both exams, the experiment group is 0.6 point higher in both exams.

Reading and writing were tested at the same time when listening and speaking were tested. The experiment group also did better than the control group. The results are omitted here.

Obviously, after one term of hard work with the multimodality autonomous teaching, the students made obvious progress in their listening and speaking capacity. These improvements could not have come from the improvement of the original monomodality, but from the result of the learners' several senses interacting with each other, such as sight, hearing and touching, etc. Thus their multiliteracy capacity was eventually improved.

4. The findings of the survey and interviews on the students are as follows:

1) This teaching and learning pattern was welcomed by almost all the learners, claiming that it increased their interest in English learning and their efficiency was boosted as well.

2) This pattern could better support their autonomous learning, because it makes learning more interesting and attractive and studying is not very boring anymore, so they could be more committed.

3) The great progress they have already achieved greatly encouraged the students of the experiment group, they promised to go on with this learning method in the future.

4) The teacher and conductor of the experiment found that more time and energy were put into the preparation of class. After class, he also needed to spend some time supervising and instructing the students. In class, he had to persist in checking their work and encouraging them to continue. But once everything had been done, he felt teaching easier and the classroom atmosphere more active and quite pleasant.

5. The answer to the questions at the beginning of the experiment.

1) Multimodality teaching has obviously boosted students of non-English majors' autonomous learning of listening, speaking and their multiliteracy capacity.

2) The advantages of pictures and videos as well as their captions can make the listening practice more vivid, and if used properly, could become great support.

3) Writing or taking notes are helpful to the students and get them prepared for speaking, through which they are relaxed and could be more brave and confident, especially when speaking is concerned.

6. The disadvantages of this approach

Some students from the experiment group complained that pictures or videos may somewhat interfere with their listening comprehension as well as their speaking ability because they got distracted and couldn't be confined to what they are listening to or what they were supposed to write. In this aspect, there arose some negative influences.

To be cooperative with other group members and stick to the plan, the students should be highly disciplined and self-controlled. Thus, some interference from the authority should be called in to make sure of that. That would be too much work for the teacher, which needs to have other ways to be replaced by.

As for the differences between the two groups, the experiment group students put more time and energy to their English learning than the control group. Therefore, we couldn't measure what the differences could be if both groups put in exactly the same amount of time and energy.

IV. CONCLUSION

In this time of multimedia and Internet, it is a waste of resources if we don't put such plenty of materials of all kinds into usage and let them help us to teach and help our students to learn, because with the help of which, teaching and learning could be more efficient and interesting. As for the difficulties, such as the high requirement for the teacher, measures could be taken to solve this problem. For example, the teacher could get some help from volunteers whose English level is high and who is willing to help.

This pattern is suitable for students of all backgrounds, no matter they are English majors or non-English majors, no matter they are in the medium level or high level. Multimodality plus autonomous learning should be the future of language teaching and learning, especially listening.

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