

A Correlative Study on Web-Assisted Listening Strategies and Proficiency

Hongmei Pang¹

Abstract

The acquisition of English listening competency has always been a big challenge for college students in China. Students do many drills in classes but what they learn are only isolated, de-contextualized skills and are unable to apply them in real-world situations. To handle the issue, researchers in Binzhou Medical University (BZMU) employ an integrated mode in College English teaching — a combination of web-assisted autonomous learning and teacher-directed classroom instructions. This paper aims to report significant improvement of students' listening proficiency while using multiple listening strategies in the new mode. It is hoped that this study will give English teachers valuable information on the listening reform, and provide a basis for empirical studies of the web-assisted language learning.

Keywords: Learner Autonomy, Web-Assisted Language Learning, Listening Strategies

Introduction

Listening plays a life-long role in the processes of language learning and social communication. The recent advances in the computer technology, especially in terms of the web and the multimedia technology, offer a platform where effective language teaching and learning can be promoted. Naturally, it is an important issue to develop students' listening ability and their autonomous learning ability via the web and the multimedia technology.

The New College English Curriculum Requirements newly issued by Chinese National Ministry of Education state, "In designing College English course, the extensive use of advanced information technology should be encouraged, computer- and Web-based.

¹ Associate Professor, Public English Department, Binzhou Medical University, 346 Guanhai Road, Laishan District, Yantai, Shandong 264003, P.R.China. Email: Hongmeipang2006@126.com

English teaching should be promoted, and students should be provided with favorable environments and facilities for language learning.” (College English Curriculum Requirements, 2007)

However, due to the learners’ extreme dependence on the teachers’ guidance in previous studying, a sudden shift to a totally autonomous and self-directed mode surely will make many students be at a loss. As Nunan (1993) points out, “it may well be that the fully autonomous learner is an ideal, rather than a reality”. Therefore in the study, sponsored by Shandong Educational Department in China, the researchers employ an integrated mode — a combination of partially teacher-directed web-assisted autonomous learning and listening classroom instructions. This paper lays emphasis on the listening strategies in the integrated mode, and is guided by the following questions:

- Can the implementation of the new learning mode result in significant improvement of students’ listening proficiency?
- What kinds of learning strategies affect listening outcomes in the new mode?
- What improvement can we make to perfect our mode so as to promote learners’ autonomy?

Literature Review

The term “learner autonomy” has gained universal attention in the domain of linguistics as well as education. Holec (1980) defined autonomy as “the ability to take charge of one’s learning”. Similarly, Little (1991) regards learner autonomy “as essentially a matter of the learners’ psychological relation to the process and content of learning.” One of the more widely accepted definitions of learner autonomy is put forward by Benson who defines it as “the capacity to take control of one’s own learning.” (Benson, 1997)

Then it might be taken for granted that “learner autonomy” means learning without a teacher or learning in isolation without interacting with other learners. In order to clarify the true sense of autonomy, Little (1991) outlines five common misconceptions about learner autonomy and they are as follows:

- Learner autonomy is synonymous with self-instruction, which means simply working without a teacher. Undoubtedly, some learners can follow the path of self-instruction and achieve some degree of learner autonomy without teachers' help, but many do not.
- In order to encourage autonomy in the students, the teacher must relinquish all of the control in or out of the classroom, as any intervention on the part of the teacher may destroy whatever autonomy the learners have managed to attain. This is not true since autonomy is still possible where the teacher remains in control.
- Learner autonomy is a new methodology. It is something that can be programmed into a series of lesson plans. Unfortunately, the concept is not that simple.
- Autonomy is a single, easily described behavior. This is also wrong, since according to Little autonomy can take many different forms, depending on the age of learners; their stage of learning and their learning goals, etc.
- Autonomy is a steady state achieved by certain learners. In reality, the permanence of autonomy cannot be guaranteed and a learner who displays a high degree of autonomy in one area may not be autonomous in another.

In summary, autonomous learning is not akin to "unbridled learning". There has to be a teacher who will adapt resources, materials, and methods to the learners' needs. Learner autonomy consists of becoming aware of, and identifying, one's strategies as a learner, and having the opportunity to reconsider and refashion approaches and procedures for optimal learning.

Project Design

Subjects

The subjects (n=317) of this study are non-English majors enrolled in the Clinical Department of BZMU in 2011. In order to make sure that the original English proficiency would not become an interfering factor to the study, all subjects' English scores in their college entrance examination were in the bracket of 106-137. Among them, 150 were boys, 178 were girls with their ages ranging from 17 to 21.

They were all native-speakers of Chinese with similar educational background, and therefore constituted a highly homogenous socio-linguistic group with regards to such variables as age, education background, exposure to and proficiency in English, which helps to avoid the bias of unforeseen socio-linguistic variables that could influence their performance and vitiate the findings. The subjects were randomly divided into the experimental group (E.G., 4 natural classes) and the control group (C.G., 4 natural classes). The group means (121.493, 122.780) and standard deviations (4.811, 5.438) of the subjects' English performance in National Entrance Examination in both groups were pretty close (See Table 1 for detail), which showed that there was no significant difference in the initial English proficiency between the experimental group (n=154) and the control group (n=163).

Web-Assisted Listening Environment

In order to ensure the higher liability and validity of the experiment, all the 8 classes, instructed by the teachers with similar qualifications during the two-period listening class every week, used the same course syllabus, textbooks, classroom activities, assignments, quizzes, and mid-term/final exams. The only difference was that the control group follows the conventional mode of listening classroom instruction, in which students had their listening class in the language labs and the teachers' authoritative role was respected; instead, the experimental group was provided with web-assisted autonomous learning opportunities, while the conventional classroom instruction was retained as part of the course instructions.

The experimental group adopted an autonomous learning plus teacher tutoring method two hours every week in the autonomous learning center. Its autonomous learning environment was provided by networked version of the textbook—New Horizon College English (NHCE) serials published by Foreign Language Teaching and Research Press, which offered various resources related to the listening course, including cultural background, presentation demos, text learning, all the listening tasks in the textbook, additional listening materials, exercises working and checking, and supplementary theme-oriented multimedia materials. All the website resources were organized in a self-access format and students in experimental group can enter www.nhce.edu.cn with the account No. & Password, log in the right net-classroom and download week schedule and checklist.

Instruments

In order to measure strategy use, Oxford's Strategy Inventory for Language Learning (Oxford, 1990) was used, modified and translated into Chinese in this research. The modified Listening Strategy Inventory was based on Oxford's classification of learning strategies and the theories on strategies and listening by Cohen (2000), Wen Q. F. and Johnson R. K. (1997). One pilot survey conducted in March, 2011 helped to fine-tune the questionnaire. In conjunction with the experts in questionnaire design at BZMU, the author revised the questionnaire in order to improve clarity to correspond more closely with the research questions.

The Listening Strategy Inventory consisted of two parts: individual information, including gender, age, major, education background, and their English scores in National Entrance Examination; listening strategy inventory. The inventory was composed of memory strategies (1~10 items), cognitive strategies (11~20 items), compensation strategies (21~25 items), metacognitive strategies (26~35 items), affective strategies (36~40 items) and social strategies (40~45 items). It used a 5 Likert-scale for which the students were asked to indicate their response (1=never or almost never true of me; 2=rarely true of me; 3=sometimes true of me; 4=often true of me; 5=always true of me) to a strategy description. However, to avoid giving any implications to the students, A、B、C、D、E are printed on the questionnaire to replace 5、4、3、2、1 as item choices. The more marks students score, the more frequently they use the learning strategies.

Data Collection and Analysis

The English scores in the National Entrance Examination were adopted to show difference in language proficiency between the two groups. In order to ensure measurement of improvement made in listening comprehension by students in both groups, data of the average listening scores for each subject were collected from the two finals held respectively in January, 2012 and July, 2012 (excluding the monthly listening tests).

The questionnaire survey was conducted by 4 teachers among all the subjects in their respective class time in September, 2012.

After explaining the nature and the purpose of the research, in the process of administering questionnaires (20 minutes), subjects were reminded that there was no right or wrong answer so they felt free to give honest responses. The Chinese translation of questionnaires was adopted lest the subjects misinterpret questionnaires.

The subjects' listening scores and their responses to the questionnaires were processed by Excel and analyzed by an expert in statistics by means of the SAS package. The statistics methods for analyses of both the test and survey data included means, frequencies, descriptive statistics, independent sample t-tests, and one-way ANOVA. The quantitative analysis involved descriptive statistics of the means and standard deviations of the subjects' listening tests and t-tests to show the improvement made in listening in both groups; statistical description of the frequency of the strategy use and the rank of ordering of the strategies by the two groups; Pearson correlation to observe if there was a correlation between the strategy use and listening proficiency.

Result and Discussion

Listening Proficiency

To ensure that the initial proficiency of the subjects would not interfere with the findings of the experimental project, subjects' English scores in National Entrance Examination were adopted to see whether there was any significant overall difference in English proficiency levels between the control group and the experimental group.

Test Type	Group	Min	Max	Mean	S.D.	F value	P
National Entrance Examination	C.G.	109.000	136.000	122.779	5.437	1.283	0.126
	E.G.	106.000	137.000	121.493	4.811		

Table 1: Listening Proficiency in National Entrance Examination

Table 1 shows that there is no significant difference in their English proficiency between E.G. and C.G. at the beginning of the program. Since the group means and standard deviations of the subjects' English performance in National Entrance Examination in both groups are very close and the corresponding p-value of the t-test is larger than 0.05.

Therefore, any difference in the results at the end of the program can be attributed, to a great extent, to the treatment instead of incompatibility of the groups.

Test Time	Group	Min	Max	Mean	S.D.	F value	P
Jan., 2012	C.G.	3.500	31.000	19.586	4.935	6.461	0.043
	E.G.	5.000	30.500	20.895	4.568		

Table 2: Listening Proficiency in January, 2012

A comparison of the subjects' listening scores in January, 2012 in Table 2 shows that there is a statistically difference in the means and standard deviations between the two groups. An independent sample t-test ($p=0.043<0.05$) yields statistical difference between the experimental and the control groups in subjects' listening scores. The average score of the experimental group is higher than that of the control one. Besides, the standard deviation of the experimental (4.568) is a bit lower compared to that of the control one (4.935), which indicates that the scores of the experimental group are more tightly grouped around the means than those of the control group. Compared with the experimental group, the control group shows greater differences in their listening proficiency.

Test Time	Group	Min	Max	Mean	S.D.	F value	P
July, 2012	C.G.	4.000	33.000	19.833	5.059	11.226	0.015
	E.G.	7.000	34.000	21.428	4.123		

Table 3: Listening Proficiency in July, 2012

Table 3 indicates that the experimental group demonstrates superiority over the control group in listening test results in July, 2012 based on means and standard deviations and t-test results. There is a bigger difference in their means and standard deviations. The difference in the means of the two groups is bigger compared to those in January, 2012, and even bigger in comparison with those in the National Entrance Examination. The standard deviation for the experimental group has become smaller (4.123) compared with the one (4.568) in January, 2012, suggesting there is a central tendency in the experimental group while the standard deviation in the control group becomes larger. A t-test was conducted to investigate if the improvement made by the two groups was significantly different.

Results (Table3) show that at 0.05 significance level the experimental group has improved more ($p=0.015<0.05$). The results show that the subjects in the experimental group as a whole have made steady achievements in their listening proficiency in one year's listening study.

Listening Strategies

Subjects' responses to the questionnaire (See Appendix) were calculated by a standard statistical package (SAS software) to get mean scores and standard deviation for each question. The results are shown in the following table.

Strategy Category	Sub-Strategies	C. G.		E. G.	
		Mean	S.D.	Mean	S.D.
Memory	Mental linage(Item 1,2,3,8)	2.993	0.442	2.981	0.553
	Image and sound(Item 4)	3.095	0.846	3.142	0.961
	Reviewing well(Item 5,7,9,10)	2.974	0.561	2.941	0.522
	Employing action(Item 6)	1.831	0.680	1.940	0.794
Cognitive	Practicing(Item 11,14)	3.204	0.451	3.281	0.495
	Receiving and sending(Item 12,13)	2.935	0.493	3.047	0.511
	Analyzing and reasoning(Item 15~18)	3.332	0.532	3.374	0.496
	Creating structure(Item 19,20)	2.331	0.489	2.332	0.712
Compen-sation	Guessing intelligently(Item 21,22,25)	3.375	0.516	3.271	0.553
	Overcoming limitation(Item 23,24)	2.974	0.532	3.322	0.564
Metacog-nitive	Evaluating learning(Item 26,32,35)	3.211	1.052	3.537	0.813
	Centering learning(Item 29,33,34)	3.183	0.721	3.309	0.734
	Arranging and planning(Item 27,28,30,31)	2.914	0.645	3.068	0.562
Affective	Lowering anxiety(Item 37)	3.127	1.112	3.223	1.023
	Encouraging yourself(Item 38)	2.815	0.670	3.006	0.694
	Taking temperature(Item 36,39,40)	2.494	0.521	2.742	0.673
Social	Asking questions(Item 42)	2.906	0.604	3.007	0.542
	Cooperating(Item 43,45)	2.442	0.773	2.564	0.661
	Empathizing(Item 41,44)	3.014	0.794	3.035	0.943

Table 4: Results of Sub-Strategies Use

Then the researcher averages the means and standard deviations of the sub-strategies in each of the six strategy categories to give a description of the overall strategy use of the control group and the experimental group and the rank ordering of the strategies according to their frequency of usage. The results are presented in Table 5.

Strategy Category	Group	N	Mean	S.D.	Rank
Memory	C.G.	163	2.723	0.636	6
	E.G.	154	2.751	0.705	6
Cognitive	C.G.	163	2.951	0.487	3
	E.G.	154	3.009	0.557	3
Compensation	C.G.	163	3.175	0.529	1
	E.G.	154	3.297	0.563	2
Metacognitive	C.G.	163	3.103	0.803	2
	E.G.	154	3.305	0.731	1
Affective	C.G.	163	2.812	0.767	4
	E.G.	154	2.990	0.793	4
Social	C.G.	163	2.787	0.725	5
	E.G.	154	2.869	0.713	5

Table 5: Frequency and Rank of Ordering of Strategy Use

Table 5 gives a description of the overall strategy use of the control group and the experimental group by presenting the means and standard deviations of the strategy use in each of the six strategy categories and the rank ordering of the strategies according to their frequency of usage. The data from Table 5 indicate that the sequence of strategies used in conventional classroom teaching is almost the same as that in web-assisted environment except for the first two. Metacognitive strategies, which are most frequently used strategies in web-assisted environment, become the second in conventional classroom environment. The second category of strategies in web-assisted environment, compensation strategies, occupies the first position in conventional classroom. That is to say, the first two strategies in integrated environment exchange their places in conventional classroom. The reasons why metacognitive strategies come first in web-assisted environment lies in that web-assisted environment are abundant in all kinds of resources. Students, in order not to be lost when confronted with such plentiful information and to get what they actually need, have to be aware of and also regulate their learning process.

They have to make good plans before learning so that they can search for information purposefully. They also have to evaluate their learning from time to time so that they can make some adjustments to better achieve the purpose. In addition students in web-assisted environment cannot wait for their teachers to make arrangements for their learning. Instead, they have to depend on themselves to push the learning ahead.

Through the analysis in the above, we may find another interesting aspect, the average mean for six kinds of strategies is not very high in both environments. In web-assisted learning, only three kinds of strategies (cognitive, compensation, metacognitive strategies) get 3.000 (a "sometimes" true rating) or above in average mean with the highest of 3.308 for metacognitive strategy while in conventional classroom only two strategies get 3.000 or above in average mean with the highest of 3.175 for compensation strategies. The average means of all the other strategies are below 3.000. This indicates that students only sometimes adopt strategies in their learning in both kinds of learning environments.

Another phenomenon arises when we compare the average mean of six strategies in web-assisted environment and in conventional classroom. That is, the average mean of all six strategies in web-assisted environment is higher than that in conventional classroom. This indicates that in web-assisted environment students will more frequently use strategies in their learning. In other words, we can say that web-assisted environment seems to be more able to activate the use of learning strategies. The reason lies in that students are supposed to study on their own in web-assisted environment. They are given enough time to learn by themselves. And there is no teacher who will force or guide them to learn. That is to say, students have to be responsible for themselves in the whole process of learning. In order to be successful in learning, students will gradually and subconsciously develop the strategy use.

Correlation between Strategy Use and Listening Proficiency

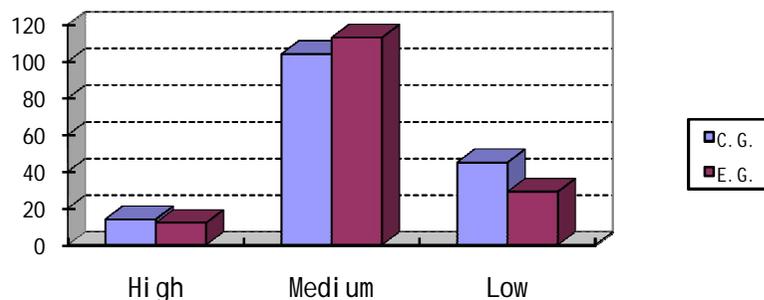


Figure 1: Distribution of Students of Different Proficiency Levels in the E.G. and C.G.

Based on the subjects' average scores in listening part in the two examinations held in January and July in 2012, we grouped the subjects into high achievers (who scored more than 25), medium achievers (who scored between 24 and 15) and low achievers (who scored below 15). There were 12 high achievers, 113 medium achievers and 29 low achievers in the experimental group while in the control group there were 14 high achievers, 104 medium achievers and 45 low achievers (Figure 1).

Group		Memory	Cognitive	Compensation	Metacognitive	Affective	Social
C.G.	High	0.623	0.496	0.384	0.542	0.335	0.074
	Medium	0.120	0.129	0.085	0.19	0.128	0.129
	Low	0.184	0.220	0.040	-0.017	-0.008	0.013
E.G.	High	0.257	0.452	0.238	0.587	0.439	-0.063
	Medium	0.340	0.137	0.108	0.250	0.107	0.048
	Low	0.116	0.086	0.066	0.083	-0.142	0.074

Table 6: Relationship between Strategy use and Listening Proficiency

Pearson Correlation is conducted in order to investigate whether there is a systematic relationship between the strategy use by subjects of different levels and their listening proficiency. Table 6 indicates that the high achievers in the experimental group are reported to have a positive moderate degree of correlation between their listening proficiency and the use of cognitive, metacognitive and affective strategies, while in the control group there is a positive moderate degree of correlation between high achievers' listening proficiency and memory, cognitive and metacognitive.

In both the experimental group and the control group, strategy use has low correlation with the listening proficiency of the medium achievers, and the negligible correlation with the listening proficiency of the low achievers. In both groups, cognitive and metacognitive fall into the moderate correlation with the listening proficiency of the high achievers, which shows that the high achievers have better learning methods, higher motivations and a better autonomous learning ability. The above findings imply that strategy use may promote listening proficiency or high listening proficiency may promote strategy use. Results also show that a significant correlation exists between the subjects' listening proficiency and their use of cognitive, metacognitive, memory and affective strategies among high achievers.

Conclusion

The experimental group has demonstrated superiority over the control group in listening test results after one-year experiment, which shows that the experiment on College English listening reform has proved to be successful. The study also proves that there are associations between learning strategies and listening outcomes and Oxford's six categories of learning strategies affect successful and unsuccessful language learners differently:

- The experimental group reports greater overall use of the six categories than the control group, which indicates that learning in the new mode promotes strategy use.
- A significant positive correlation is reported between the students' listening proficiency and their learning strategies among high achievers in both groups, but no significant correlation exists between medium and low achievers' listening proficiency and their learning strategies.

The result shows that students do adopt learning strategies more frequently in web-assisted environment than in conventional classroom. Therefore we can say that computer may activate the use of strategies by students.

When confronted with an environment which is different from what they are accustomed to, students may not feel at ease at first. But gradually they find that the new environment gives much room to the display of their potentials.

They feel challenged and are motivated to explore more. In this process they will employ more strategies and achieve more. Therefore it can be concluded that web-assisted environment facilitates the use of learning strategies. Students may “learn how to learn” better in this new environment. Web-assisted autonomous learning may play an important role in the future College English teaching and even in the English Language Teaching field. The insight gained in the study will help College English teachers design better learning environments.

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Appendix

Strategy Inventory for Listening Comprehension

Name _____ Gender _____ Age _____

Education Background _____

English scores in National Entrance Examination _____

Please take a few minutes to fill out this survey. You need only tick (√) in the appropriate place to indicate your choice. Please be assured you're your answers will be kept strictly confidential. Thank you for your support!

A= I always used this strategy.

B= I often used this strategy.

C= I used this strategy occasionally.

D= I rarely used this strategy.

E= I have never used this strategy.

Memory Strategies

- A B C D E 1.我通过音标记记忆生词。
- A B C D E 2.我通过造句或联系上下文的方法记忆生词或词组。
- A B C D E 3.我根据词的功能、词性、用途等进行归类记忆生词。
- A B C D E 4.我借助图像、图画、符号等方式帮助记忆。
- A B C D E 5.在听听力时,我有意识地用笔记帮助记忆。
- A B C D E 6.在听听力时,我会运用缩写、符号等形式,减少纪录负担。
- A B C D E 7.我用重复多遍的方法记忆生词。
- A B C D E 8.在听听力时,我记录下重要的信息或容易忘记的内容(如时间、地点、数量等)。
- A B C D E 9.我背诵好的文章或课文。
- A B C D E 10.我课外有规律地反复温习已学内容。

Cognitive Strategies

- A B C D E 11.为了提高听力,我经常听听力录音。
- A B C D E 12.我课外主动听英语广播。
- A B C D E 13.我课外主动看英语电视或电影。
- A B C D E
- 14.在做听力练习时,我先看问题,然后再在听力材料中有目的地寻找答案。
- A B C D E
- 15.假如在听英语材料时碰到生词,我会尽量记住生词的发音,然后根据发音,在字典上查找它的拼写和意思。
- A B C D E 16.听英语时,我喜欢边听边在脑海中将所听到的信息译成汉语。
- A B C D E 17.听英语时,我知道如何划分意群,并按意群去听。
- A B C D E 18.当听英语时,我争取听懂每一句话。
- A B C D E 19.我经常通过标题以及所要回答的问题来预测材料内容。
- A B C D E 20.在听音过程中,我经常通过一些话语标记,如but, because, therefore, as a result等所听信息判断推理。

Compensation Strategies

- A B C D E 21.当听到我不懂的词或短语时,就猜测词义。
- A B C D E 22.我根据我已有的背景知识猜测我听不懂的部分。
- A B C D E 23.我根据说话者的语气来猜测我听不懂的部分。
- A B C D E 24.假如在听英语时碰到生词,我会跳过生词,继续听下去。
- A B C D E
- 25.我借助视觉信息,如听力材料的文字、图表、关键词、练习题等猜测大意。

Metacognitive Strategies

A B C D E

26.我研究自己的个性特点，找出哪些特点有利于自己的英语学习，哪些特点阻碍自己的进步，从而能发挥自己的优势，采取相应的措施，克服弱点。

A B C D E 27.我有自己的英语学习计划。

A B C D E 28.我对改进自己的英语学习有明确的要求。

A B C D E 29.我能针对自己听力的薄弱环节，加强训练。

A B C D E 30.在我的英语学习计划中，我安排了听力学习计划。

A B C D E 31.我评价自己学习英语进步的情况，从而制定相应的计划。

A B C D E 32.我评价自己的学习策略，从而找出存在问题 and 解决方法。

A B C D E 33.我尽可能利用身边可练习英语的机会，扩展听的机会。

A B C D E

34.我尽量多用英语交谈，通过语言的输出使所听信息在脑海里留下更深的印痕，即通过语言的运用来帮助语言的学习。

A B C D E 35.我借鉴英语成绩优秀者的学习经验，进而改进自己的学习策略。

Affective Strategies

A B C D E 36.当我听不懂时，我感到紧张。

A B C D E 37.当我学英语感到紧张时，我鼓励自己，使自己放松。

A B C D E 38.在英语学习中，我常常鼓励自己，增强自己学英语的信心。

A B C D E 39.在听英语材料时，我觉得和别人比起来，自己的听力很差。

A B C D E 40.在听英语材料时，我非常害怕老师提问。

Social Strategies

A B C D E 41.我学习英语国家的文化背景来辅助英语学习。

A B C D E 42.听英语材料时，碰到不懂的地方我就问老师或同学。

A B C D E 43.我喜欢和同伴一起学习。

A B C D E

44.课外，我选择自己感兴趣的方式进行学习，如听歌、看电影、听广播等。

A B C D 45.在听力学习中，我喜欢和老师、同学交流，以检测自己的学习效果。