Correlation between Listening Anxiety and Listening Strategies of Chinese Postgraduate Students of Science and Engineering: A Case Study at SUES

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Abstract

English listening is one of the five basic skills such as listening, speaking, reading, writing and translation that a Chinese postgraduate should acquire, and it is also the most significant one. In this study, 194 first-year postgraduate students at Shanghai University of Engineering Science were invited to report their strategies use and listening anxiety in the questionnaire with the 5-Likert Indirect Foreign Language Listening Strategies Scale and the 5-Likert Foreign Language Listening Anxiety Scale. The SPSS13.0 was used to analyze the descriptive statistics, reliability analysis, correlation analysis, Chi-square test and One-way ANOVA, which indicated a medium listening anxiety and a medium level of strategies use. Metacognitive strategies were more frequently used than social and affective strategies, the correlation between listening proficiency and listening anxiety was significantly negative, correlation between listening proficiency and indirect listening strategies was significantly positive, and that between indirect listening strategies and listening anxiety was significantly negative. Indirect listening strategies were useful to allay listening anxiety and would be incorporated into our normal classroom teaching.

Keywords: Listening strategies, Listening anxiety, Correlation, English teaching.
1. Introduction

English listening is one of the five basic skills such as listening, speaking, reading, writing and translation that a Chinese postgraduate should acquire, and it is also the most significant one. For EFL learners, listening comprehension is an active and interactive channel between the listeners and the listening materials. EFL listeners should construct meaning from listening content by themselves. It involves listeners’ receiving of sound, processing received information in their minds, through personal experience, and by using prior knowledge and so on. Therefore, listening comprehension is a complicated cognitive and metacognitive process and listeners are the processors of the input information. Listening comprehension is totally different from the other basic skills such as speaking, reading, writing and translation. It is unlike reading comprehension in which readers can go back and forward to explore the information that they are not quite sure about and might not understand completely. All the listeners can do is to catch up with the speakers as soon as possible.

Many variables can affect foreign language listening competence. Among Rubin’s 5 major factors of text characteristics, interlocutor characteristics, task characteristics, listener’s characteristics and process characteristics, anxiety is an important affective factor and should not be overlooked, because the anticipation of foreign language use in receiving information can provoke anxiety, especially anxious students might misunderstand linguistic structures or infer meaning from context for fear of making mistakes and losing face. Tobias proves that anxiety may impair the ability to take in information, to process it, and to retrieve it when necessary. In the literature on language learning anxiety, some language learners have reported that listening comprehension is “highly anxiety-provoking if the discourse is incomprehensible”. Thus, anxiety as a type of affect has gradually been a focus of research in the area of listening comprehension and it is a “variable that must be respected in teaching and accounted for in research”. So, how to alleviate the listening anxiety of the postgraduate students in China and help them to be more effective listeners has been a big question without any clear answer. This study will explore the relationship between the listening strategies and listening anxiety in the foreign language learning situation and the differences in the listening anxiety degree between different levels of strategies users and their characteristics. Since few researchers have carried out any research in this area, it will provide empirical evidence to this area of listening anxiety research.

2. Literature Review

Anxiety has been regarded as a controversial factor which influences language learning with negative and positive effects. Most researchers (Horwitz et al, 1986; Young, 1991; MacIntyre, 1999; and Oxford, 1999) tend to regard language anxiety as a debilitating anxiety which is specific to language learning setting. Listening anxiety will distract attention and impair the involvement in listening; therefore, the negative effects of listening anxiety draw more attention from researchers (Aida, 1994; Kim, 2000; Elkhafaifi, 2005; Zhou, 2003; Chen, 2004). As a disciplinary research of learning strategies, listening strategies draw a lot of interests of researchers. Berne in her literature review of listening comprehension strategies lists the

Vogely considers “lack of listening strategies as one source of anxiety” and believes that “we [teachers] may help them approach LC [listening comprehension] texts with less anxiety, if we teach students to be strategic listeners”. Kim proves that “as process-related sources of anxiety, the misuse of listening strategies were another pervasive argument among the participants (in his study)” Vogely focuses on addressing listening comprehension anxiety and sources of listening anxiety whereas Kim on sources and effects of the listening anxiety experienced by Korean EFL students in foreign language learning situations. Both of them fail to explore the relationship between listening anxiety and listening strategies in depth. In China Zhou believes listening anxiety impairs listening performance and the negative effects of listening anxiety can be controlled to some degree by using affective strategies and suggests that listening anxiety has negative effects on listening, and there is a correlation between listening anxiety and affective strategies. But Zhou does not mention the role of metacognitive strategies use in listening anxiety. “There is a general consensus among researchers in the fields of education and L2 learning about the important role that metacognition plays in enhancing thinking and comprehension (Byrnes, 1996; Costa, 2001; Garner, 1987; Marzano et al., 1998; Sternberg, 1998; Weinstein, Goetz, & Alexander, 1998; Wenden, 1998).” according to Vandergrift et al. “Learners with high degrees of metacognitive awareness are better at processing and storing information, finding the best ways to practice and reinforce what they have learned”. By using metacognitive strategies and social-affective strategies in this study, we will definitely provide empirical evidence to the research of listening anxiety and strategies use.

3. Methodology

In this study, we took advantage of the quantitative approach to explore the correlation between listening proficiency and listening anxiety, between listening proficiency and indirect listening strategies and between indirect listening strategies and the listening anxiety for first-year postgraduate students. The participants are 194 first-year postgraduate students at Shanghai University of Engineering Science (SUES) during spring semester. 12 subjects have failed to follow the instructions and their data are excluded leaving a total sample of 182. The participants are from 5 first-year postgraduate classes of science and engineering majors at SUES. There are about 38 in each class and the gender ratio between male and female was about 9:3. All of them have learned English for at least 13 years before entering the university.
After about 2 semesters at SUES, they will have to take the College English Test Band Six (CET-6) and listening comprehension is one part of the final exam. Although it is not compulsory for them to sign up for and pass CET-6, they are often under pressure to pass the test so as to compete for better jobs after graduation. Therefore, it is possible that many participants in this study are experiencing or have already experienced some degree of anxiety in foreign language listening.

The instruments used in this study consist of the Foreign Language Listening Anxiety Scale (FLLAS), the Indirect Foreign Language Listening Strategies Scale (IFLLSS), and CET-6, the questionnaire for personal background information. FLLAS is to measure the level of their listening anxiety. We chose the main part of Kim’s (2000) English version of FLLAS which was based on the Foreign Language Classroom Anxiety Scale designed by Horwitz et al in 1986. It was based on a five point Likert-type scale with five possible responses to each of the questions, which ranges from 1 (Strongly Disagree) to 5 (Strongly Agree). The answer indicating the highest degree of anxiety receives 5, whereas the answer indicating the least anxiety is 1. Our final version has 35 items and 3 categories: tension and worry over English listening (Items 2, 3, 4, 9, 10, 12, 13, 14, 16, 17, 19, 20, 21, 22, 24, 31, 32, 33, 34, and 35), lack of confidence in English listening (Items 6, 7, 8, 13, 18, 25, and 27), concern about insufficient prior knowledge( Items1, 5, 11, 15, 23, 29, and 30) and some items (Items 6, 21, 23, 25, 27, 31, and 35) are negatively worded so that the participants would not “fall into a pattern of marking only one side of the rating scale”(Vandergrift et al, 2006). The maximum range for the FLLAS is 35 to 175, with lower scores indicating lower anxiety and higher scores showing higher anxiety.

IFLLSS is to investigate the frequency of their indirect listening strategies use. On the basis of the language learning strategies of Oxfordxiii, the IFLLSS, which covers two main parts, metacognitive strategies and social-affective strategies, is an integration of Vandergrift et al’s (2006) and Zhou’s (2003). IFLLSS is a five point scale, which ranges from 1 (This statement is never or almost never true of me) to 5 (This statement is completely or almost completely true of me). The answer indicating highly frequent use of the strategy is 5, whereas the answer indicating lack of the strategy receives 1. Therefore, 1 to 5 stands for the frequency of indirect foreign language listening strategies use. The final version includes 44 items in which Items 5, 6, 9, 10, 11, 13, 14, 16, 17, 18, 19, 20, 39, and 41 belong to the category of social-affective strategies and Items 1, 2, 3, 4, 7, 8, 12, 15, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, and 42 to the category of metacognitive strategies. Items15, 19, 25, 28, 30, and 40 were negatively worded.

CET-6 listening tests are used to check the participants’ English listening proficiency. CET-6 is an authoritative English proficiency test for college students in China, which has been used for nearly 30 years. Consequently, the listening proficiency test for first-year postgraduates of SUES is the listening parts of CET-6 in June and December 2015. In these listening tests, Section A consists of conversations and Section B of passages. All of the items are multiple choice items and the full score is 20 points with one point for each question. Questionnaires are in English except the questionnaire for individual background information which was used to get demographic information of the participants. The first part of the questionnaire
elicits basic demographic information, including name, gender, the National Postgraduate Entrance Examination (NPEE) scores, the last semester’s listening grade. The research purpose was explained and the privacy of the participants was ensured to be respected by the researcher.

4. Discussion

Several colleague teachers were involved in this project to help launch investigations and collect the data in the spring term. The participants were guaranteed that the results and personal information would not be publicized and had nothing to do with their final term test scores. They started with CET-6 listening questions after putting down their names. 30 minutes later the test papers were collected. After listening tests, questionnaires were given to each participant, which took about 30 minutes to finish. 188 copies of questionnaires and test papers were collected and 182 valid.

Descriptive statistics, reliability analysis, correlation analysis and One-way ANOVA which were provided by SPSS13.0 were covered in the quantitative analysis. To summarize the participants’ background information and responses to the questionnaires, descriptive statistics (mean, SD, maximum, minimum, frequency distribution of the variables) were computed for each item. We first recoded the negative worded items and calculated the mean of the two CET-6 listening scores, the sum of indirect listening strategies scores, the sum of social-affective strategies scores, the sum of metacognitive strategies scores, and the sum of anxiety scores for each participant. The relationship of the three scores such as the NPEE scores, the last semester listening scores, and the mean of the CET-6 listening comprehension; the relationship between listening proficiency and listening anxiety; the relationship between indirect listening strategies and listening proficiency; the relationship between indirect listening strategies use and listening anxiety were tested by the correlation analysis. On the basis of the sum of indirect listening strategies scores, three groups were divided: the high (one quarter), the intermediate (half) and the low (one quarter). The range of strategies use scores was 102 to 197. Therefore, the score of the low level group of strategies use was below 130; the score of the group of high level strategies use was over 151. The rest was the intermediate level of strategies use group. Chi-square test was used to measure the linear association between the level of the indirect listening strategies use and the level of listening anxiety. One-way ANOVA was adopted to test the null hypothesis that there was no significant difference in the listening anxiety level between the three groups of different strategies use levels.

4.1. Data Processing of the IFLLSS and Discussion

In this study, the total scores ranged from 102 to 197 with a mean of 141.87 and a standard deviation of 15.04. A mean scale score was also computed. On the basis of a 5-point format, the mean score was 3.6 indicating an intermediate level of strategies use. The two categories of IFLLSS such as metacognitive strategies and social-affective strategies received different scores. The metacognitive strategies use scores ranged from 81 to 120 with a mean of 99.01 and a standard deviation of 9.93. The mean scale score was 4.03, which was higher than the mean scale score of the overall strategies use. The social-affective strategies use scores
ranged from 34 to 59 with a mean of 43.5 and a standard deviation of 6.35. The mean scale score was 3.11 which was lower than the mean scale score of the overall strategies use. The result showed the frequency of the strategies use was not very high, and it was especially true with the social and affective strategies use frequency.

As a result of SPSS analysis, Cronbach’s alpha was .837 for the IFLLSS and Cronbach’s alpha of the two categories were .673 for the social and affective strategies use portion and .819 for the metacognitive strategies use portion. The results were acceptable because Cronbach’s alpha of the overall scale was higher than .80 and Cronbach’s alpha of the subcategories was higher than .60. Therefore, it was a scale with high reliability and the items in the scale were consistent. On the basis of the analyses, the mean scale score of the use of metacognitive strategies and social-affective strategies, we found that metacognitive strategies use of the participants was better than social-affective strategies, though each subcategory of metacognitive strategies use was not balanced. Moreover, most of the participants lacked some listening strategies.

4.2. Data Processing of the FLLAS and Discussion

In this study, the total scores ranged from 68 to 148 with a mean of 107.29 and a standard deviation of 14.02. A mean scale score was also computed. On the basis of a 5-point format, the mean score was 3.11 indicating a slightly elevated level of listening anxiety. The three categories of FLLAS: tension and worry over English listening (Items 2, 3, 4, 9, 10, 12, 13, 14, 16, 17, 19, 20, 21, 22, 24, 31, 32, 33, 34, and 35), lack of confidence in English listening (Items 6, 7, 8, 13, 18, 25, and 27), concern about the insufficient prior knowledge (Items 1, 5, 11, 15, 23, 29, and 30) receive different scores. The first category ranged from 51 to 91 with a mean of 66.01 and a standard deviation of 8.32. The mean scale score of this category was 3.19. The second category ranged from 11 to 31 with a mean of 21.13 and a standard deviation of 3.79. The mean scale score of this category was 3.08. The third category ranged from 15 to 34 with a mean of 22.07 and a standard deviation of 4.05. The mean scale score of this category was 3.24. The result showed anxiety due to the first and third categories were roughly equal. Anxiety due to lack of confidence for the participants was less than the anxiety caused by the insufficient prior knowledge or tension and worry over English listening.

As a result of SPSS analysis, Cronbach’s alpha was .842 for the FLLAS and Cronbach’s alpha of the three categories were .714 for the category about the tension and worry over English listening and .672 for the category about lack of confidence in English listening and .684 for the category about concern about insufficient prior knowledge. The results were acceptable because Cronbach’s alpha of the overall scale was higher than .80 and Cronbach’s alpha of the subcategories was higher than .60. Therefore it is a scale with high reliability and the items in the scale were consistent.

4.3. Correlation Analysis

4.3.1 Analysis of the Background Questionnaire, IFLLSS and FLLAS

The two-tailed correlation analyses showed that participants’ CET-6 listening scores is positively correlated with the NPEE scores and the last semester listening scores at the .00
level, which indicated that the changing direction of the CET-6 listening mean scores was consistent with that of NPEE scores and that of the last semester listening scores. In other words, those who have higher scores in the NPEE and the semester listening tests usually scored high in the CET-6 listening tests. So we can conclude that the mean of the CET-6 listening scores can be accepted as a method to test the listening proficiency of the participants.

In this study, the indirect listening strategies, especially metacognitive strategies, was significantly and positively correlated with the mean of the CET-6 scores at the .00 level. The level of strategies use increased, and the mean of the CET-6 listening scores (namely listening proficiency) increased too; and vice versa. But it was weak for the correlation between social and affective strategies and the mean of the CET-6 listening scores. The correlation test showed that the first-year postgraduate students’ listening proficiency was negatively correlated with the listening anxiety at the .00 level. If the listening anxiety increased, the proficiency would decreased, and vice versa. The indirect listening strategies use level was significantly and negatively correlated with listening anxiety degree at the .03 level. That indicated that as the indirect listening strategies use level increased, the degree of listening anxiety decreased; and vice versa. Metacognitive strategies use was significantly and negatively correlated with listening anxiety at the .00 level; but it was weak for the correlation between social-affective strategies use and listening anxiety.

4.3.2 Linear Relationship between Listening Anxiety and Listening Strategies Use Level

Researchers used Chi-square test to check whether there was a linear relationship between indirect listening strategies level and listening anxiety level. SPSS13.0 analysis showed that significance of Pearson Chi-Square test and Likelihood Ratio test were both slightly higher than .05, which indicated the two variables were not completely independent. The significance of the Linear-by-Linear association was .008, which was lower than .05 and that showed there was a linear relationship between the two variables. The significance of Pearson Chi-Square test and Likelihood Ratio for the two variables: the level of metacognitive strategies and listening anxiety level was .00, which suggested that the two variables were closely dependent on each other. The significance of the Linear-by-Linear Association test was .001, which showed that there was a linear relationship between the two variables. The significance of Pearson Chi-Square test and Likelihood Ratio for the two variables: the level of social-affective strategies and listening anxiety level was .037 and .034, which indicated that the two variables were dependent on each other. The significance of the Linear-by-Linear Association test was .425, which demonstrated there was a weak linear relationship between the two variables.

4.3.3 Difference between Three Groups of Strategy Use Level

One-Way ANOVA indicated that the significance level was .008, far lower than .05, which showed that the between groups difference was very significant. The significance of Homogeneity Variances test was .891, far higher than .05, which suggested that the variances of the three level groups of strategies use were equal and “it fits the condition of one-way ANOVA”, because homogeneity variances are the base of One-Way ANOVA"xxiii. The Post
Hoc tests told us that there was a significant difference at the .05 level between the three groups of strategies use levels: the high, intermediate and low by a Scheffe test. The high level of strategies use group’s listening anxiety was significantly different from the intermediate and low level groups, but the difference in the anxiety degree between the intermediate level group and the low level group was not significant. Means Plot showed that it gave a clear picture that high level strategies use group’s anxiety was significantly lower than the other groups and the low level strategies use group’s anxiety degree was higher than the other two groups although it was a little bit higher than the intermediate level group.

5. Conclusions and Implications

The above data processing demonstrated us the following conclusions and some pedagogical implications. Firstly, the participants in this study did experience slightly elevated level of foreign language listening anxiety as a result of FLLAS item analyses, which was consistent with the previous researches. Secondly, the overall level of the indirect listening strategies is an intermediate one, which indicated that there was still plenty of room for improvement of indirect listening strategies use for such postgraduates of science and engineering. Most students used metacognitive strategies more frequently than social-affective strategies and the overall average of attention controlling strategies use was the highest for the attention is the most important factor which influences listening. The integration of the two categories of strategies for most students is not satisfactory in foreign language listening and learning process. Chances are that most participants were not aware of these strategies and lacked systematic learning strategies training. Thirdly, the correlation test proved that the listening proficiency of first-year postgraduate students was negatively correlated with the listening anxiety. Listening anxiety and poor proficiency contributed to the poor listening performance. Fourthly, the correlation between indirect listening strategies use and listening proficiency was positive, especially for the correlation between metacognitive strategies use and listening proficiency. Postgraduates who frequently used indirect listening strategies generally had high listening proficiency while those who usually did not use indirect listening strategies or lacked some indirect listening strategies enjoyed low listening proficiency. And postgraduates with high levels of listening proficiency used strategies more frequently than students at middle or low levels of listening proficiency. Besides the frequency of indirect listening strategies use, the integration of strategies use was crucial to listening proficiency. The use of social-affective strategies could not predict the listening proficiency. The effect of social-affective strategies on listening proficiency was not as significant as the effect of metacognitive strategies on listening proficiency. Thus social and affective strategies should be taught in Strategies training. However, the integration of metacognitive strategies use and social and affective strategies use could predict students’ proficiency. As for this, indirect listening strategies indeed had a positive effect on one’s listening performance or proficiency. And explicit and integrated training in both metacognitive and affective language learning strategies supported the effectiveness of such strategies training and students showed less anxiety with the formal writing procedures, as well as becoming more aware of their own strengths and weaknesses.

Fifthly, the Chi-Square test told us that the relationship between indirect listening strategies
and listening anxiety was linear. The correlation test showed that there was a negative correlation between indirect listening strategies which meant if indirect listening strategies use level increased, the listening anxiety degree would decrease, and vice versa. The One-Way ANOVA analysis showed that high level indirect listening strategies use group’s anxiety was significantly lower than the other groups and the low level Indirect Listening Strategies use group’s anxiety was higher than the other two groups although it was slightly higher than the intermediate level group. The significant negative correlation between indirect listening strategies and listening anxiety was proved in this study. The high level group of indirect listening strategies users suffered less anxiety in listening than the low level group of strategies users. In other words, students who used indirect listening strategies frequently suffered less listening anxiety than those who did not usually use indirect strategies or lack some indirect strategies. Therefore, lack of some indirect listening strategies or not frequently using some indirect listening strategies were the cause of listening anxiety in this study. It was obvious that indirect listening strategies could lower listening anxiety and indirect listening strategies training should be included in the English Teaching Requirements. Because metacognitive strategies of indirect listening strategies were very effective in attention direction and selection, and in coping with attention distraction caused by listening anxiety, which would also help listeners be more attentive and more involved in listening. Planning and arranging strategies and evaluating strategies were helpful to students’ self-management and self-evaluation. Full preparation for every listening task, careful planning for listening, and objective evaluation of listening would certainly help the listeners to be more effective in listening and thus lowered listening anxiety. Lowering your anxiety strategies in social-affective strategies were the most effective strategies which would be directly used for lowering anxiety, although some of them were very foreign to Chinese students. In a word, indirect listening strategies were helpful to listening comprehension and effective in coping with listening anxiety therefore indirect listening strategies training should be introduced to listening classrooms.

Last but not least, as for pedagogical implications, the results and findings of this study will certainly, to some degree, help teachers better understand the students’ affective states and strategies competence and offer some insights into the listening teaching for teachers. Therefore, English teachers must focus students’ affective state, teach them strategies to cope with listening anxiety effectively, manage to make the listening class interesting and rewarding so that students will not feel bored or tired about listening, and last but not least, carry out the strategies training according to students’ listening proficiency and listening anxiety degree.

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