

The Actuarial and Simulation of Learning Strategies under Japan's University Education

1st Fan Wu

College of Foreign Language in Beihua University

Jilin 132013

105429662@qq.com

2nd Zhen Chen*

College of Computer Science and Technology in Beihua

University

Jilin 132013

59975235@qq.com

* corresponding author

Abstract—Based on the study of Oxford's (1990) study strategy, this paper taking students from the Japanese parent class and international students in Tohoku University as object, investigates the choice of learning strategies during the process of independent listening for those students with different verbal learning abilities according to the current research on listening strategy learning in Japan. Utilizing the method of statistics and machine learning in the project teaching method to analyze the differences of the learners with different abilities in the use of learning strategies projects and the use of learning strategies are analyzed and make a simulation study.

Keywords—Autonomous learning, Learning strategy, Data actuarial analysis, Simulation study.

I. BACKGROUND AND PURPOSE

Oxford(1990, P8) believes learning strategy is to make learning easier, faster, more efficient, more enjoyable and more effective and to ensure that effective learning methods can be adopted quickly for new learning subjects. This research will, based on Oxford's (1990) language learning strategy, focus on students' independent learning in acquiring a second foreign language from direct learning and indirect learning so as to identify methods that can improve students' listening learning. To be specific, this research will focus on the following three subjects. ① In the process of listening learning, how to use learning strategies to better understand the listening content? ② Which one is the learning strategy that learners use more, direct learning strategy or indirect learning strategy? ③ Whether the differences in the language acquisition level of learners lead to differences in the application of direct learning strategy and indirect learning strategy?

II. PREVIOUS RESEARCHES

There have been a lot of previous researches on listening learning and learning strategy in Japan, including liu(2016)、Mkita (2015)、Lu (2012)、Yin (2001)、Dohoang (2010)、Ywazaki (2006) etc.

Liu(2016) has done research on the number of TOEFL listening questions that can be recalled by learners with learners of Chinese, whose grammar is similar to that of English, and learners of Japanese, whose grammar is significantly different from that of English, as the research object, this research has examined the impact of the strategy of taking notes on improving listening ability. This research has, from the perspective of language type theory, regarded the strategy of taking notes as a new foreign language learning strategy. The research object of Yin (2001) is also students from Chinese universities, the impact of the application of classroom learning strategy and learning strategy outside the classroom on the effect of listening learning has been identified in this research, the importance of predictive ability in listening learning and the difficulties of determining what learning strategies to use in listening learning have also been discussed in this research. Dohoang (2010) has, based on the research of Yin (2001), studied the application of learning strategies of Vietnamese college students based on academic year and the differences in the use of learning strategies in different academic years and has found out that freshmen use learning strategies more and students can use learning strategies more flexibly as their learning proficiency improves. Ywazaki (2006) has, through comparing auditory learning and visual learning, proposed that auditory learning is more closely related to the use of learning strategy than visual learning. Through these previous researches, we can find out that learners with higher levels of language proficiency master more learning strategies than those who just begin to learn a foreign language and they can use such strategies more flexibly. This research will, based on the learning strategy theory of Oxford (1990), focus on the students of Tohoku University and study the language learning situation of students and the differences in their learning ability in self-regulatory learning under Japan's university education. The reason why I chose to study listening is that I have attended the overseas student program of the second semester of 2017 during my stay in Tohoku University as a visiting scholar, the overseas student program includes such subjects as semantics, culture, dialogue, composition, practice etc., but there was no listening course. I'm very concerned about how students learn listening skill under Japan's university education, because the overall listening level of students of the university where I work is below average.

III. RESEARCH PROCESS

A. Research Object

The research object is the 69 students from two classes of Tohoku University, the second grade of the economics department and the overseas student class. Among which there are 38 boys and 31 girls. In terms of the respondents' native

language, there are 51 native speakers of Japanese, 5 native speakers of Chinese, one native speaker of Korean, Spanish, Dutch, Thai, Russian, English and Indonesian, three native speakers of Italian and German. In terms of the respondents' target language, 43 students' target language is Chinese, 18 students' target language is Japanese, 8 students' target language is English. See the language learning experience and language proficiency in table 3.2.1.

TABLE 3.1.1 THE TABLE OF THE LANGUAGE ACQUISITION TIME AND LANGUAGE PROFICIENCY OF RESEARCH OBJECTS

number of people according to their target languages (descending order)	number of people according to their native languages (descending order)	Learning Time	Language level	Language proficiency
Chinese(43)	Japanese(43)	1.4 years	foundation stage(A2)	Be able to communicate with daily expressions slowly and clearly and understand simple daily conversations.
Japanese(18)	Chinese(5)	3 years	independent stage(B1)	Be able to understand class discussion.
	Korean(1)	3 years		
	Spanish (1)	5 years	independent stage(B2)	Be able to understand class discussion and 60% to 70% of TV and film dialogues in natural speed. but not be able to understand long and suggestive dialogues in the target language.
	Dutch(1)	3 years		
	Italian (3)	5 years		
	German(3)	4.5 years		
	Thai(1)	10 years		
	Russian (1)	10 years		
	English (1)	7 years		
	Indonesian (1)	3.5 years		
English(8)	Japanese(8)	7.3 years		

According to the Can-do language proficiency scale of Touno (2013, P35), students' language proficiency can be divided into foundation stage(A1,A2), independence stage (B1,B2), and proficient stage (C1,C2). In the questionnaire, the performance item ① and ② are set as the proficiency standard of A1, the performance item ③ and ④ are set as the proficiency standard of A2, the survey result shows that the 43 Japanese students who study Chinese are at the foundation stage (A2) level, the performance item ⑤ and ⑥ are set as the proficiency standard of B1, the performance item ⑦ and ⑧ are set as the proficiency standard of B2, of the 18 overseas students, 6 are at the independent stage (B1) level, 12 are at the independent stage (B2) level. the performance item ⑨ and ⑩ are used to determine whether the subjects are proficient in the target language, according to the statistical result, no one has reached the proficiency level.

In addition, the "reason of poor listening performance" of the 69 respondents have been surveyed in the form of single choice, multiple choice and free response, 56% of students at the foundation stage and independent stage think the "reason of poor listening performance" is "insufficient effort". This research will, based on the SILL(Strategy Inventory for Language Learning) of Oxford (1990), analyze how the students at the foundation stage and independent stage learn listening and how should they learn it in the future based on the data.

IV. SURVEY AND CONCLUSION

The survey results of this research are as follows:

According to the survey, more than half of the respondents believe that the reason for their poor listening skill is because of "insufficient effort".

According to the survey, respondents "sometimes use" learning strategies in listening learning.

Both Learners at the foundation stage and learners at the independent stage use direct learning strategy more frequently. It's found out that learners at the independent stage use learning strategies more frequently by comparing the use frequency of learning strategies of the two groups of respondents.

T-test has been conducted on the performance items of various learning strategies of learners at the foundation stage and learners at the independent stage, the result shows that there are significant differences in these performance items between the two groups of learners, which means there are significant differences in learning strategies between them.

According to the result of t-test, learners at the independent stage pay more attention to the use of "cognitive learning strategy" and "metacognitive learning strategy".

In this research I have conducted a survey of the subject "① how to use learning strategies in listening learning to better understand the listening content" and proved that respondents "sometimes use learning strategies". Learners at the independent stage can use learning strategies more skillfully than learners at the foundation stage. In addition, according to the survey,

learners at all stages use direct learning strategy more. As for the subject “② which learning strategy is used more by learners, direct learning strategy or indirect learning strategy?”, it has been found out that learners at the foundation stage use affective strategy more and do not use metacognitive strategy much, while learners at the independent stage use memory strategy more and do not use social strategy much. Learners at the independent stage attach more importance to communication skills in listening learning and take it as the goal to improve their listening skill from the smallest aspects, but according to the survey, they do not use social strategy much, including “collaborative learning” and “asking questions”. In contrast, learners at the foundation stage use affective strategy more and use metacognitive strategy least.

Regarding the subject “③ whether the use of direct learning strategy and indirect learning strategy will be different due to the different language acquisition levels of learners”, there are significant differences in the performance items of memory strategy, cognitive strategy, metacognitive strategy and social strategy between learners at the foundation stage and learners at the independent stage. In terms of mean value, learners at the independent stage has higher mean value in all of these four groups of learning differences. What’s more, I have conducted t-test to see if there are significant differences in the use of learning strategies between the two groups of learners and found out that there are significant differences in the use of metacognitive strategy and cognitive strategy between the two groups of learners. Which means learners at the independent stage have shown the characteristic of having clearer learning goals in learning.

V. ACKNOWLEDGEMENTS

This article is supported by the 13th Five-Year planning project of the educational science group in Jilin province (Grant GH170060 and GH170061), and by Key Teaching Projects of Beihua University “Evaluation and Monitoring of Self-regulated Learning Methods for Zero-Foundation Japanese Majors” in 2018 and by the young teachers promotion project of Beihua University in 2016, and by the 13th Five-Year planning project of the education department in Jilin province to technology research (Grant JJKH20180343KJ), and the project for training outstanding youth of Jilin (Grant 20156412), of which Chen Zhen is the project leader. So Chen Zhen is the corresponding author of this article. This article is also the achievement of the 2017 youth backbone teachers' overseas training project, chaired by China Scholarship Council (Study number 201702325009).

VI. REFERENCES

Books:

- [1] Sirayi Kyokou Okada Masako How to Study Foreign Language, Japan: Iwanami Shoten 2014.
- [2] By Zolt'an D'ornyei, Yasima Yasima Tomoko Takeuchi Wari translate Introduction to the Making of Questionnaire about Foreign Language Education Japan: Shohakusha 2014.
- [3] Sirahada chihiko, Wakabayasi Sigenori, Murano Ijinn From the Theory of the Second Foreign Language to the Method Research College English Education Society and Learning Strategy Research Society Japan: LIBER 2005.
- [4] Uchida Naori Dispersive analysis of SPSS with clear solution Japan: Tokyo Shoseki 2007.
- [5] Uchida naori (2007) Investigation, statistics and analysis of the SPSS survey questionnaire Japan: Tokyo Shoseki 2007.
- [6] Nikutotsuyo, Tomokiko Language Learning Strategies That Foreign Language Teachers must Know, Japan: Bonjinsha 2001.

Dissertations

- [1] Yun LongLiu The Learning of the Listening Strategy of Recall and the Comparison of Proficiency between Mother Tongue and the Second Foreign Language [D] Doctoral Dissertation of Keio University 2016.
- [2] Wang Ruiqi, A Survey of the Awareness of Listening Strategy ——Take Taiwanese Who Study Japanese as the Object of the Survey 『Language · Regional Culture Study』 [J] 2015, pp87-110.
- [3] Soejima kensaku, Li Yuhui, Budou Ayaka, Japanese Proficiency and the Relationship between Learning Strategy and Motivation —— A Comparative Study of Japanese Learners from China and Russia [J] 『Tohoku University Higher Education · Summary of Student Support Organization』 2015, pp37-47.
- [4] Makita Asako, Study on the Effect of Listening Learning Strategy ——Comparison between the Treatment Group and Control Group [D] Doctoral Dissertation of Nagoya University of Foreign Studies, 2015.
- [5] Lu Xiaobo, Study on the Motivation of Listening Learning of Chinese who Study Japanese ——Take Students Majoring in Japanese from Chinese Universities as the Study Object, Doctoral Dissertation in International Studies of Utsunomiya University [D] 2012.
- [6] Wu Ruhui, Study on the Learning Strategy in the Process of Listening Skill Development ——Take Taiwanese Who Study Japanese as the Study Object [D] Doctoral Dissertation of the Japanese Department of University of Tokyo 2011.
- [7] Dohoang Ngan, Study on the Learning Strategy of Vietnamese Who Study Japanese [J] Research on international cooperation, 2010, pp35-46.