Study on Lower Level Student's Learning Styles (Focused on TOEIC Listening Comprehension)

Myeong-Hee Shin
Department of General English, Hannam University, 70 Hannamro,
Daeduk-gu, Daejeon, South Korea

Abstract: This research is focused on lower level student's learning styles, particularly with regards to their listening comprehension. To overcome difficulties in an EFL context, lower level students should try to find learning styles that are suitable for them. This research aims to investigate the possibility of identifying learning styles based on student's learning motivations. To collect the data, several instruments were used. These were pre- and post-TOEIC listening tests and two questionnaires, one dealing with learning styles and the other with student's English learning motivation. The collected data were analyzed using the statistics program SPSS (Version 18.0), reliability analysis and independent sample t-test. Lower level student's learning styles were significantly dependent on their learning motivation. Especially, extrinsic motivation plays a more crucial role for students than intrinsic motivation. Also, learning motivation for females is higher than males. Learning styles that lower level students preferred are teacher-centered, reflective first but changed to active and global. They also preferred top down rather than bottom up with extrinsic motivation. In Korea, most of the lower level student's English learning styles are passive, top-down and forced by extrinsic, rather than intrinsic motivation. However, depending on the techniques and practices of the instructor in the class, students altered and modified their learning styles. Therefore, understanding student's learning styles is crucial in making them motivated and ensuring their progress in English.

Key words: Learning styles, learning motivation, top-down, extrinsic motivation, intrinsic motivation, TOEIC

INTRODUCTION

There has been an increasing emphasis in the importance of communication in English. The student's role in the classroom has been changing and teaching methods tend to be more practical. For a long time, teacher-centered classes have been the norm in English classrooms in Korea. Therefore, students are very passive, disinterested and as a consequence, more ineffective. To address this problem, there needs to be some consideration of what student's individual learning styles are and how to cater to these styles to increase their motivation to learn. Understanding these differences can help teachers adapt their teaching methods so as to be more compatible with student's preferred learning styles. So far, traditional methods have been mostly face-to-face, a teacher centered, uniform educational system. However, student needs have changed and it has become necessary for teachers to provide different learning atmospheres. According to the preferences of student's learning styles, understanding different learning styles provide valuable awareness into the educational situation (Felder and Spurlin, 2005). There have been

some previous studies in student's learning styles with different cultural backgrounds (Park, 2000) and student's different learning styles within a Korean cultural background (Shin, 2016). It is important to research student's learning style preference focused on student's achievement and their levels. Therefore, the purpose of the present study is to investigate lower level student's learning style preferences based on their learning motivation with emphasis on English listening comprehension.

Student's learning styles refer to personal differences which are closely related to personal preferences (Joy and Kolb, 2009). Learning styles are defined as affective characteristics and physiological features that determine how students understand and interact in their learning circumstance 5. According to Felder and Silverman (1988), there are four aspects of learning styles: sensing and intuitive perception, visual and verbal input, active and reflective processing and sequential and global understanding. In the case of sensing style students, they prefer practical learning such as clear data andresults from experiments. On the other hand, students who like intuitive learning styles prefer to
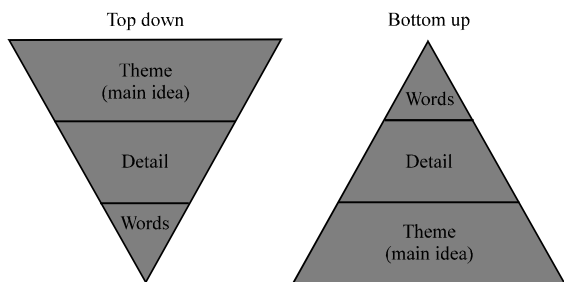
Fig. 1: Top down and bottom up learning process

Table 1: Reliability of learning motivation

Motivations	Question No.	Cronbach's α
Amotivation	3, 4, 12, 19, 22	0.726
Extrinsic	16, 18, 30, 31, 33	0.672
Intrinsic	2, 9, 14, 15, 20, 23, 32, 34	0.864

rely on their internal affective states. There are two kinds of processing: one is active learning in which students participate well and enjoy discussing and commenting and the other is a reflective one in which students like observing and being controlled. The aspect of input also plays a role in visual and verbal learning styles. Students who like drawing and graphs and charts tend to be visual and students who like words and sounds tend to be verbal. In the case of the understanding aspect, students who like gradual processing prefer a sequential learning style and students who like whole comprehensive things prefer a more global learning style.

As students have various backgrounds of knowledge and abilities, diverse class designs should be considered to fit the situations (Liegle and Janicki, 2006). It is important to offer different learning circumstances based on personal differences and needs. According to Field (2004), there are two approaches used when developing effective listening skills: one is top down and the other is bottom up. As shown in Fig. 1, top down is a whole language approach in which students learn by contextualizing and using their knowledge in real situations. In contrast, bottom up involves mechanical drills without any background knowledge. Most Korean students are not familiar with the top down learning process but they are quite familiar with bottom up processing. As a result, seeing the bigger picture when performing listening activities is very difficult for them. Students who are accustomed to bottom up processing focus on listening for every detail of sound or word level 9. For lower level students, top down processing is more effective in keeping students motivated to learn language listening (Minkyung, 2011).

The research on student's learning motivation has been increasing steadily. According to Dornyei (2001), language ability and language learning motivation have been a focus of research, since, the 1960's. There are two main types of motivation: extrinsic and intrinsic. Extrinsic motivation refers to guidance by outer stimuli such as reward, compliment and punishment (Brown, 2001). It was suggested that intrinsic motivation was a core motivator guided by interests in the educational process. It referred intrinsic motivation as self-decision or self-efficacy.

This study aims to find out the proper learning styles based on the learning motivation, especially for lower level students. As well, the present study attempts to explain that the importance of understanding student's learning styles which may provide crucial clues as to why some students study and some do not.

MATERIALS AND METHODS

Subjects: The subjects of this study were 90 students from a university in Korea. These students participated in an elective general practical English course. This credit course was 2 h in length, taken once a week. After a pre-TOEIC listening comprehension test, the students were assigned to lower level classes. Students were mostly familiar with teacher-centered classes and bottom up learning strategies. Students were between 20 and 25 years of age, majoring in Engineering, Arts and Sports Science.

Procedure: To determine the lower level student's English learning styles, both top down and bottom up strategies were used. While the students participated in top down processes before the listening tasks, after doing the course material they performed various activities such as predicting content from the pictures and communicating their predictions. After the listening, tasks, the students would discuss with their group members what difficulties they had during the listening activities. While the students were participating in bottom up process, they initially listened for understanding, looking for the main phrases that gave clues to the answers and focusing on linking, assimilation and other targeted specific aspects. There were several class activities for the lower level students to keep motivated such visual materials, guessing, verbal, information gaps, etc.

Instruments: The collected data were analyzed using the Statistics Program SPSS (Version 18.0) and reliability analysis.

Data collection and analysis: There were TOEIC listening comprehension tests that contained 4 different sections of listening questions. Students listened to questions and short conversations recorded in English and answered questions as to what they heard. Also, in order to research student's learning styles and motivation, questionnaires were done. To investigate learning styles, the Felder and Silverman Model was used. There are

12 learning style questions about listening that allow students to choose their learning preferences and whether they preferred a top down or bottom up process. To find out student's learning motivation, there were 35 questions that dealt with the area of motivation, both extrinsic and intrinsic.

In this study, a survey in the form of a questionnaire was made to find out student's learning styles based on their motivation in English learning. The English learning style questionnaire used was adapted from 15 and the English learning motivation questionnaire was adapted from 16 (Table 1).

RESULTS AND DISCUSSION

Lower level student's learning styles: According to the Felder and Silverman Model, there are 4 aspects of learning styles: sensing and intuitive perception, visual and verbal input, active and reflective processing and sequential and global understanding 6.

Table 2 shows the result of lower level student's learning style preferences before the experiments. These results showed that they preferred reflective (Average = 45, $p<0.05$) and sequential (Average = 47, $p<0.05$.) It showed statistically significant preference for the reflective and sequential style than sensing and visual styles.

However, Table 3 shows the learning style preferences after the experiments. Lower level students preferred active processes as the highest score of average 47 ($p<0.05$). It showed statistically significant preference for the active learning style. The students liked global learning style as the 2nd highest (Average = 45, $p<0.05$) that showed statistically significant. Students still liked sensing and visual but there were little changes from reflective to active and from sequential to global after the experiments.

Table 4 shows the result of top-down and bottom up learning processes for lower level students. There were 12 questions which asked the student's learning style preferences to find out their preferences for top down or bottom up processes. According to the result, students liked predicting contents from the pictures before the actual listening started. That is to say, students preferred a top-down process rather than bottom up as the highest number 12 of 12. In the case of process of assimilation, students preferred bottom-the up process rather than top down as the score of 8 of 12.

Lower level student's learning motivation: Table 5 shows the result of lower level student's English learning motivation by their majors. There are no significant differences in the area of student's majors of Engineering, Arts and Sports Science. However, a significant difference can be shown in the area of extrinsic motivation as 0.004 (**$p<0.01$).

Table 6 shows the result of lower level student's English learning motivation depending on gender differences. In actuality, there is no significant difference between male and female students. However, female student's value (M = 3.20) is slightly higher than male student's one (M = 3.16).

This study proposed the importance of determining proper learning styles based on student's learning motivation, especially for lower level students. Before this study, students preferred their familiar learning styles, sequential and reflective as shown by Table 1. However, at the end of the study, students learning preferences were changed. They still liked sensing and visual processing but they changed their learning style preferences from reflective to active and from sequential to global. It means that most of the lower level students preferred having the teacher deliver knowledge first, a process which they are very familiar with. However, as

Table 2: Learning style before the experiment

Learning styles	Lower limit	Upper limit	Average	SD
Sensing	20.00	38.00	18	4.30
Visual	31.00	37.00	22	3.30
Reflective	31.00	44.00	45*	20.02
Sequential	32.00	44.00	47*	24.09

Table 3: Learning style after the experiment

Styles	Lower limit	Upper limit	Average	SD
Sensing	20.00	30.00	16	3.60
Visual	31.00	36.00	22	3.30
Active	33.00	46.00	47*	21.02
Global	32.00	43.00	45*	25.01

*$p<0.05$

Table 4: Learning styles of top down and bottom up

Items	TD	BU	Total
Vocabulary	6	6	12
Predicting	12	0	12
Linking	6	6	12
Assimilation	4	8	12

Table 5: Lower level student's learning motivation by major

Variable/Major (N = 30)	M	SD	F-values	p-values
Amotivation				
Engineer	0.80	0.729	1.702	0.186
Arts	1.05	0.742		
Sports	1.08	0.676		
Extrinsic				
Engineer	2.21	0.567	5.576	0.004**
Arts	2.22	0.541		
Sports	2.45	0.678		
Intrinsic				
Engineer	2.21	0.684	1829	0.158
Arts	2.56	0.660		
Sports	2.39	0.723		

**$p<0.01$

Table 6: Motivation depending on gender differences

	Male		Female	
Motivation	M	SD	M	SD
3.16	0.57	3.20	1.03	0.170

they experienced new class activities with learning motivation, their preferences changed to a more holistic, comprehensive style. Most Korean students are familiar with teacher-centered classes and a teacher's role in class was prioritized over the student's role. That is why students preferred bottom up learning styles first. Thus, for lower level students, their learning motivation was minimal. As Table 5 shows, lower level students showed a preference for extrinsic motivation.

According to, the result of lower level student's English learning motivation depending on gender differences, female students have slightly higher learning motivation compared to male students.

CONCLUSION

The lower level students preferred, sensing, visual, active and global learning style, top down learning processing rather than bottom-up, based on extrinsic motivation. This study has its limitations. With only the small number of subjects, it is difficult to generalize the results. For more meaningful research study, sample students should be expanded to include not only schools but also learning environments outside of schools.

SUGGESTION

Therefore, further research could include more varied and a larger sample size of students and research environments. The importance of the research or suggest applications and extensions.

REFERENCES

Brown, H.D., 2001. Teaching by Principles: An Interactive Approach to Language Pedagogy. University of Michigan, Ann Arbor, Michigan, ISBN:9780130282835, Pages: 480.

Dornyei, Z., 2001. Teaching and Researching Motivation. Longman, London.

Felder, R.M. and J. Spurlin, 2005. Applications, reliability and validity of the index of learning styles. Int. J. Eng. Educ., 21: 103-112.

Felder, R.M. and L.K. Silverman, 1988. Learning and teaching styles in engineering education. Eng. Educ., 78: 674-681.

Field, J., 2004. An insight into listener's problems: Too much bottom-up or too much top-down?. Syst., 32: 363-377.

Joy, S. and D.A. Kolb, 2009. Are there cultural differences in learning style?. Int. J. Int. Relat., 33: 69-85.

Liegle, J.O. and T.N. Janicki, 2006. The effect of learning styles on the navigation needs of Web-based learners. Comput. Hum. Behav., 22: 885-898.

Minkyung, R., 2011. Effects of reading models on English reading ability and strategy: A case of Korean high school students. Master Thesis, Hankook University of Foreign Studies, Seoul, South Korea.

Park, C.C., 2000. Learning style preferences of Southeast Asian students. Urban Educ., 35: 245-268.

Shin, M.H., 2016. Preferred ways of study based on Korean cultural background. Indian J. Sci. Technol., 9: 149-155.