

Perceptual Learning Styles in Korean Middle School EFL Textbooks

Yang-Sook Lee
Korea University

Lee, Yang-Sook. (2013). Perceptual learning styles in Korean middle school EFL textbooks. *Modern English Education*, 14(2), 1-22.

The purpose of this study is to examine Korean English as a foreign language textbooks for middle school education from the perspective of perceptual learning styles. One of Reid's hypotheses about learning styles is that "learning styles, if unchecked, persist regardless of teaching methods and materials" (Peacock, 2001, p.2). This hypothesis forms the rationale and framework for this study. Korean EFL students in a middle school completed a Reid's Perceptual Learning Style Preference Questionnaire. The results of this study indicate that among four basic perceptual learning styles, auditory is a major preference of students, while kinesthetic, visual, and tactile are minor; additionally, with regard to relation to others, group is preferred to individual. However, this study finds that activities in Korean EFL textbooks are not properly attuned to students' learning styles. The textbooks use auditory and visual activities predominantly; furthermore, the textbooks employ significantly fewer activities for kinesthetic and tactile types; individual type activities outnumber group activities. This study provides insights into the topics that have the potential to improve the practice of EFL teaching.

[individual difference/perceptual learning styles/EFL textbooks and materials/
/ /]

I. INTRODUCTION

Korean English as a foreign language (EFL) education for secondary school has been implemented under the 7th National English Curriculum focusing on communicative competences. However, the Korean English curriculum has been revised (Notification on August 9, 2011), and the revised curriculum becomes effective in 2013. The revised English curriculum puts more stress on teaching and learning by emphasizing individual differences, such as styles, aptitude, and strategies, in regard to instructions and materials

for English classes. Moreover, the new curriculum includes a provision for designing and using materials by incorporating individual differences, especially learning styles. As the national English curriculum has focused on the development of communication skills integrating four language skills, Korean middle school EFL classroom teaching may be practiced by using materials with relatively little consideration of students' learning styles.

Learning styles have been studied in a sub-area of second language and foreign language acquisition (Dörnyei & Skehan, 2008; Ellis, 2004; Skehan, 1998). Many research studies have recognized learning styles as factors among individual differences that influence students' achievement in second language and foreign language learning (Chen, 2009; Ehrman, Leaver & Oxford, 2003; Spada, Barkaoui, Peters, So & Valeoet, 2009). It is understandable that focusing on learning styles helps students' performance and facilitates the activation of a learner-centered philosophy (McLoughlin, 1999; Wong & Nunan, 2011). A study of learning style, with emphasis on a learner's typical way of approaching learning, has defined that "learning style is a predisposition that may be deep-seated, but does imply some capacity for flexibility, and scope for adaptation of particular styles to meet the demands of particular circumstances" (Dörnyei & Skehan, 2008, p. 602).

Students with different learning styles are affected by a teacher's instruction offered in class and by activities included in second language and foreign language learning materials (Felder & Henriques, 1995; Kinsella, 1995; Oxford, 2003b). In second language and foreign language (hereafter L2) classes, "activities and textbooks often remain fixed, unvaried and static, adaptive to individual needs in only minor ways; in some cases, not at all while learners are expected to fit into the system and to cope as best they can" (McLoughlin, 1999, p. 222). In other words, when activities included in textbooks for the class are not compatible with students' learning styles, the students may not be as engaged and lose interest in learning. Therefore, the mismatches between students' typical learning styles and class instructions utilizing activities negatively affect students' performances (Felder & Henriques, 1995; Peacock 2001; Spada et al., 2009). Teachers who possess great knowledge of the subject they are teaching may still be greatly unsuccessful in educating their students if they lack awareness of diverse learning style preferences and approach their students with an inflexible teaching method (Kinsella, 1995). As a result, there are differences in learners' progress and success in L2 classrooms (Ellis, 2004; McLoughlin, 1999; Riding & Grimley, 1999). A number of educational research studies have noted that pedagogy can be effectively developed and can be beneficial through an understanding of learning styles (Ehrman & Oxford, 1990; Ellis, 2004; Montgomery & Groat, 1998; Oxford, 2003a, 2003b; Kroonenberg, 1995; Stebbins, 1995; Violand-Sanchez, 1995; Wong & Nunan, 2011).

Taking this into consideration, the purpose of this study is to examine Korean EFL textbooks for the second grade of middle school education from the perspective of

perceptual learning styles. This study investigated two main areas. The research questions are as follows:

1. Which aspects of perceptual learning styles are particularly significant among Korean middle school EFL students?
2. To what extent are perceptual learning styles incorporated into activities of Korean EFL textbooks?

The intention of this case study is to provide a partial picture of Korean EFL classroom reality.

II. LITERATURE REVIEW

1. Learning Styles

Educational research has identified learning styles that account for how students approach learning in a particular situation. Students use their preferred approaches in a given context of language learning or any other subjects (Oxford, 2003a). Learning styles are generally recognized as “cognitive, affective, or psychological traits” (Reid, 1987, p. 87); numerous ways of acquiring, retaining, and retrieving information in order to respond to the learning environment (Felder & Henriques, 1995); and “individuals’ preferred ways of processing information and dealing with other people” (Ellis, 2004, p. 534). For example, some learners prefer to see information (visual learners), while others prefer to hear it (auditory learners).

Researchers have proposed various models from the viewpoint of focusing on different variables (i.e., perceptual mode; modality; personality). The term “learning style” often represents a variety of terms, such as cognitive styles, sensory styles, personality styles (Reid, 1987; Wong & Nunan, 2011). In this regard, various definitions of learning style have appeared in research literature. First, cognitive styles were defined as individual differences in the way people perceive, think, solve problems, learn, and relate to others. Cognitive style has been studied with information process in the psychological functioning dimension (Kozhevnikov, 2007). For example, the styles of field independent versus field dependent are used as approaches to experiencing the environment and processing information (McLoughlin, 1999). Second, sensory styles have been used to identify sensory modes of learning styles. Comprehensive studies have shown that a self-reporting questionnaire enables students to identify and select their perceptual preferences on learning styles, such as visual, auditory, kinesthetic, tactile, and haptic (Kinsella, 1995;

Reid, 1987). Perceptual learning styles, in particular, refer to “the variations among learners in using different senses to understand, organize, and retain experience” (Reid, 1987, p. 89). Last, personality variables have been recognized as effective factors that characterize individuals’ learning styles. Personality styles were developed based on Jung’s personality types (i.e., sensing and intuition) by which people tend to perceive the world (Felder & Henriques, 1995). For example, the Myers–Briggs Type Indicator has been widely used to identify learning styles (Ehrman, et al., 2003).

Using different models, research studies have been conducted on learning styles across educational levels, disciplines, genders, and ages (Braio, Beasley, Dunn, Quinn & Buchanan, 1997; Ehrman & Oxford, 1990; Felder & Henriques, 1995; Gardner & Hatch, 1989; Hilberg & Tharp, 2002; Kolb & Kolb, 2005; Lawrence, 1993; Montgomery & Groat, 1998; Nielsen, 2008; Riding & Grimley, 1999; Rogers, 2009). The majority of these studies in educational psychology have been conducted with native English speakers, whereas further studies have included L2 learners from various cultural backgrounds and nationalities (Alfonseca, Carro, Martin, Ortigosa & Paredes, 2006; Chen, 2009; Ehrman, 1996; Felder & Henriques 1995; Honigsfeld & Dunn, 2003; Hyland, 1993; K. J. Kim, 2007; Y. K. Kim & T. Y. Kim, 2011; Liu & Littlewood, 1997; Naimie, Siraj, Piaw, Shagholi & Abuzaid, 2010; Peacock, 2001; Psaltou-Joycey & Kantaridou, 2011; Reid, 1987, 1995; Wintergerst, DeCapua & Verna, 2003; Wong & Nunan, 2011).

2. Perceptual Learning Styles

Studies on perceptual learning styles have highlighted L2 learners’ learning styles and provided meaningful implications for L2 instruction. Hyland (1993) investigated Japanese students’ perceptual learning styles in a tertiary college in New Zealand. The researcher confirmed Reid’s (1987) findings that Japanese learners exhibit no strong learning style preferences. The students appeared to have multiple minor preferences for auditory, tactile, kinesthetic, and individual learning, while they showed a negative¹ preference for visual and group learning. The researcher discussed language learning difficulties experienced by many Japanese students, since the visual modality was a negative style for many Japanese students. This study concluded that the students were not likely to benefit from an education system that emphasized the importance of reading texts, composition, and written grammar exercises. The information from this study suggests strategic approaches for teaching students in L2 classes.

¹ Reid (1995) uses ‘negligible’ instead of ‘negative’. However, as in Reid (1987), C. C. Park (2002), and K.-J. Kim (2007), the term ‘negative’ is used. This paper follows these practices of using ‘negative’.

Bailey, Onwuegbuzie and Daley (2000) examined the potential relationship between a combination of learning styles and foreign language achievement in either French or Spanish courses at the college level, as measured by the PEPS, a comprehensive learning styles instrument. The findings from this study indicated that a kinesthetic learning among selected learning style variables was significantly related to foreign language achievement. For example, higher achievers preferred informal classroom designs, while they did not prefer a kinesthetic learning style. The educational implications of this study are that students' gaining aids relevant to learning styles promote foreign language achievement.

The findings of past studies have explained that matching teaching styles to learning styles can significantly influence student attitudes, behaviors, and performances in L2 classes. Peacock (2001) investigated preferred perceptual styles of EFL students and EFL teachers at Hong Kong University. This study reported that the EFL students experienced learning difficulties when there were mismatches between teaching styles and learning styles. The findings from this EFL context imply that a balanced teaching style incorporating a range of students' perceptual learning styles helps a teacher improve a teaching approach in a way that fills the gap in the EFL learning process. Naimie et al. (2010) found that the dominant perceptual learning style of the English major students in Azad University, Iran, is visual. The results of this study revealed that the students performed better when teaching styles were matched to their learning styles. Consequently, this showed the impact of teaching styles on learner achievement.

A number of research studies have investigated perceptual learning styles in relation to key constructs of second language acquisition (SLA), such as motivation, aptitude, application of strategies, and proficiency. Y. K. Kim and T. Y. Kim (2011) examined Korean secondary school students' perceptual learning style preferences in order to show possible effects on ideal L2 self which is one component of the *L2 motivational self system* (Y. K. Kim & T. Y. Kim, 2011) and motivated L2 behavior relevant to English proficiency. For example, the researchers recognized that a higher level of motivated L2 behavior is influenced by an L2 self that is strongly formed by the students' visual style preference. Based on these findings, it is suggested that Korean secondary school students' motivation to learn English can be increased by enabling them to realize and develop their ideal L2 self through individual journal writing. Chen (2009) investigated relationships between grade level, perceptual learning style preferences, and language learning strategies among Taiwanese EFL students in grades 7 through 9. This study explored that there were statistically significant relationships between grade level and learning style preference; in addition to this, statistical significant relationships were shown between perceptual learning style preferences and language learning strategies. The author discussed that students often use strategies that reflect their preferences for learning styles. Implications

are that classroom teachers should be more aware of their students' differences in learning styles and ensure that their instructions appealing to students in different grade levels.

As previous studies on learning styles have shown, individual difference can be understood by learning styles as students' characteristic differences. Even though recognition of learning style comes from a variety of perspectives focusing on different variables in the learning environment, the findings of learning style studies have provided teachers with some insights that can guide their decisions in developing strategic approaches and in responding to students' needs in learner-centered classrooms.

3. L2 Textbook

Many scholars have addressed the issues regarding learning styles and classroom implementation. Reid (1987) pointed out that L2 instruction methods and materials, in many cases, have been developed with the learning needs of native speakers in mind. Learning styles, in particular, should be reflected in necessary materials of L2 classes. If students' learning styles are properly incorporated into activities and materials, accordingly combined with a teacher's instructions, the students feel at ease and take advantage of learning in classes. Otherwise, students are reluctant to participate in class, and they have negative attitudes toward learning (Oxford, 2003b). In this regard, L2 materials should be designed and prepared with the awareness of individual differences and learning needs (Naimie et al., 2010). L2 teachers should be aware of incorporating learning styles into strategic teaching methods, as well as using materials that are appropriate for students' wide range of characteristic needs (Naimie et al., 2010; Rogers, 2009).

A number of studies have presented the rationales for using L2 materials by adapting learning styles when teachers use activities included in textbooks and materials so that teachers and students benefit from activities in L2 materials (Rogers, 2009; Wong & Nunan, 2011). Felder and Henriques (1995) formulated several dimensions of learning styles and proposed particular activities and materials to adapt to different needs of students in foreign language classes. In this way, they addressed how L2 materials can be used effectively to accommodate students' learning styles. According to Bailey et al. (2000), mismatch between students' styles and a teacher's instruction that utilizes activities in materials seems to cause a drawback of students' learning. For example, even though small group activities are commonly used in L2 classrooms, other types of activities (i.e., working alone) even facilitate some students to learn better and achieve more from L2 learning.

Examination of L2 materials has presented the assumptions and practices relevant to accommodating learning styles. Peck (1995) examined and evaluated elementary ESL materials approved by the state of California. The researcher suggested that elementary

ESL students learn better if their learning styles are considered in lesson plans and incorporated into proposed activities in textbooks and materials. For example, young children in North American elementary schools learn by doing (i.e., games and game-like activities). The understanding in using these types of activities comes from the recognition of children's kinesthetic or multisensory styles. The philosophy and approaches to using materials can be adjusted by catering to learning styles in order to attune to the different needs of students and inform teachers who are interested in learner-centered education (McLoughlin, 1999).

III. METHOD

The goal of this case study is to obtain information regarding how perceptual learning styles are incorporated in the activities employed by Korean EFL textbooks for second grade middle school students. Selected Korean middle school EFL textbooks are examined for the purpose of investigating activity types in accordance with perceptual learning style preferences of Korean middle school EFL students. These textbooks are used as the units of this case study. This study involves the quantification of learning style information that is the collection of naturally occurring data (Johnson, 1992). Even though the number of textbooks examined in this study is small, the approach of this study represents the relevant feature of Korean EFL textbooks.

1. Participants

Participants were 70 students in grade 2, from two homerooms, attending a middle school in Yongin City, Gyeonggi-do, Korea. The students were directed to complete Reid's Perceptual Learning Style Preference Questionnaire (PLSPQ) (Reid, 1995) during the class time. For the data collection, an EFL teacher who is currently teaching English to the students explained the purpose of the questionnaire and the method of answering the questionnaire.

2. Data Collection

1) PLSPQ

The instrument used in this study is Reid's (1995) PLSPQ. Previous studies reported that the PLSPQ is a valid and reliable measurement tool for EFL and ESL learners' learning styles (Chen, 2009; Hyland, 1993; Peacock, 2001; Verna & Wintergerst, DeCapua, 2003).

The PLSPQ consists of 30 statements that measure the following six perceptual learning styles: (1) visual learners prefer reading and studying charts; (2) auditory learners prefer listening to lectures and audiotapes; (3) kinesthetic learners prefer experiential learning through active involvement with a learning situation; (4) tactile learners prefer hands-on learning activities; (5) group learners prefer working with others; and (6) individual learners prefer studying alone. In order to investigate Korean middle school EFL students' perceptual learning styles, the students were asked to respond to each of 30 statements regarding their study of English, using a five-point scale in which (5) indicates "strongly agree"; (4), "agree"; (3), "undecided"; (2), "disagree"; and (1), "strongly disagree."

Each item of Reid's PLSPQ was translated into Korean with a reference to the previous study by K. J. Kim (2007), which also translated the PLSPQ into Korean for a study of Korean EFL college students. In the present study, a number of items in the PLSPQ were translated with a minor modification from the original PLSPQ to properly incorporate the learning context into Korean. For instance, the word "classmates" was added to some items to make sure that the students would report their preferences for group learning.

2) Textbook Selection and Activity Types

Korean middle school EFL textbooks for second grade were chosen for the following reasons. According to J. Y. Park (2008), middle school textbooks include relatively more diverse activities. Eight out of 19 government-certified (2009) English textbooks were selected arbitrarily.

The textbooks used for this study are the following:

- [Y. H. Chang et al. (2009). *Middle School English 2*. Neungryul Publishing]
- [I. D. Kim et al. (2009). *Middle School English 2*. Gyohaksa Publishing]
- [S. G. Kim et al. (2009). *Middle School English 2*. Doosan Donga Publishing]
- [Y. J. Kim et al. (2009). *Middle School English 2*. Didimdol Publishing]
- [O. L. Kwon et al. (2009). *Middle School English 2*. Gumsung Publishing]
- [D. M. Lee et al. (2009). *Middle School English 2*. Gihaksa Publishing]
- [B. G. Lee et al. (2009). *Middle School English 2*. Koryeo Publishing]
- [J. Y. Lee et al. (2009). *Middle School English 2*. Chunjaegyoyuk Publishing]

In categorizing activities into six types, from the perspective of perceptual learning style, the middle three lessons of each textbook were examined. It was found that about 15% of the total material could be ideally chosen to be examined around the midpoint of each textbook (K. W. Cha, 2003). Therefore, three lessons out of each selected textbook were chosen and reviewed. For example, in a textbook of 12 units, the midpoint involved units 5,

6, and 7. In this study, lessons 5, 6, and 7 were around the approximate midpoints of a textbook with 10 or 11 lessons; lessons 6, 7, and 8 were around the approximate midpoints of a textbook with 12 lessons.

3. Data Analysis

Preferred learning style profiles of an individual student were collected based on a student's self-reporting responses to a five-point Likert scale, ranging from strongly agree to strongly disagree. As to the students' perceptual learning style preferences, I followed the data analysis approach adopted by Reid (1995). Based upon the scores of the students' self-reporting responses, their learning styles were classified as either *major*, *minor*, or *negative*. Specifically, if the score was in the range of 38–50, it was classified as a major learning style preference; 25–37, minor learning style preference; and 0–24, negative. Major means it is a preferred learning style; minor, that it is one in which learners can still function well; and negative means they may have difficulty learning that way.

In order to investigate Korean middle school EFL textbooks, activity types in each textbook were examined. The activities included in the selected textbooks were first examined by the titles and directions as given in the textbooks. Then, they were categorized following the Explanation of Learning Style Preferences (Reid, 1995) that provides the description of different perceptual learning styles and gives examples of classroom activities (Appendix B).

IV. RESULTS AND DISCUSSION

Table 1 presents summary information on the students participating in this study. Of the 70 students, 33 were boys and 37 were girls.

TABLE 1
Summary Information on Participants

Total Number of Students	70
Boys	33
Girls	37

Table 2 shows the descriptive statistics of students' scores from the PLSPQ. There were 30 questions in all. Five questions were used to identify each of the six perceptual learning styles: Auditory, Visual, Tactile, Kinesthetic, Group and Individual. Following Reid (1995),

for each perceptual learning style, the scores of the six identifying learning styles were first summed and multiplied by 2. This means that the total score a student could receive for each learning style is 60. The average among students ranges from 31.8 for individual to 38.5 for auditory. The students show their preferences in the order of auditory, kinesthetic, tactile, visual, group, and individual.

TABLE 2
Descriptive Statistics of Students' Scores from PLSPQ

Style	Sum	Average	Median	Max	Min
Auditory	2,692	38.5	40	48	20
Visual	2,352	33.6	34	48	20
Tactile	2,382	34.0	34	50	14
Kinesthetic	2,436	34.8	36	50	16
Group	2,318	33.1	34	50	12
Individual	2,224	31.8	30	50	20

Table 3 presents the results from an additional analysis on the students' perceptual learning style preferences. Reid (1995, p. 205) classifies a student's preference for each learning style as major, minor, and negative learning style, according to the score of the category. Specifically, if the score is in the range of 38–50, it is classified as a major learning style preference; 25–37, minor learning style preference; and 0–24, negative. To conveniently see the students' learning style preferences, depending on whether a student learning style is major, minor, or negative, a number from 1 to 3 is assigned. Specifically, for each score, a major learning style preference is given a number 3; minor learning style preference, 2; and negative learning style preference, 1. Then, the summary statistics are taken, across the students, for each learning style. The results clearly indicate that auditory is the most preferred learning style of the students responding. Not only is its average far greater than the other types, but it is the only learning style that has 3 as its median. This means that more than half of the students show auditory as a major learning style preference. In fact, as the last three columns of Table 3 show, auditory is the most preferred learning style for 43 students. On the contrary, individual is the least preferred by the students responding. Not only does it have the lowest average, but it also has the lowest number of students with a major learning style preference, and the highest number with a negative learning style preference.

TABLE 3
Descriptive Statistics for Students' Perceptual Learning Style Preferences

Style	Average	Median	# Stud.'s as Major	# Stud.'s as Minor	# Stud.'s as Negative
Auditory	2.59	3	43	25	2
Visual	2.21	2	20	45	5
Tactile	2.21	2	28	29	13
Kinesthetic	2.29	2	27	36	7
Group	2.14	2	22	36	12
Individual	2.06	2	20	34	16

Table 4 presents the summary statistics of activity types employed by the eight textbooks examined in this paper. Panel A presents the raw counts of activities associated with the six types from the perspective of perceptual learning style. The last column shows the sum of numbers of activities for each type. As to the activity types, the sum varies greatly from only 9 for tactile type to 316 for auditory type. Meanwhile, whether an activity is group or individual is not classifiable independently. Each of the learning style activities has to be done either in a group or individually. For example, an auditory type activity is done in a group or individually. Therefore, the table reports the results in two dimensions: one over perceptual learning styles, and the other, whether the activity is done individually or in a group. Between group and individual types, individual type activities far exceed group type, with 407 to 198. The last row of Panel A, titled "Sum" shows the total number of activities for corresponding textbooks. It has also some variations ranging from 55 to 91. Therefore, the raw sum of counts over the 24 lessons may not properly measure the proportions of activities associated with each perceptual learning style employed by the textbook. In order to correct this problem, the proportions of activity types for each textbook are evaluated. The proportions are presented in Panel B. For example, the proportion of auditory type activities for "Chunjaegyoyuk" is 58%. This is calculated by dividing the number of auditory type activities, 38, by the total number of activities, 66. The last column of Panel B shows the average of these proportions over the eight textbooks investigated. The results show that the proportions of tactile and kinesthetic activities are only 2% and 3%, while auditory and visual type activities are 52% and 44%, respectively. As in Panel A, individual activities dominated group type with 67% for individual and 33% for group. In summary, tactile and kinesthetic type activities are rarely employed by the textbook; individual type dominates group type.

TABLE 4
Distribution of Activity Types Presented in Selected Textbooks

Panel A: Raw Counts of Activity Types									
Type	T1	T2	T3	T4	T5	T6	T7	T8	Sum
Auditory	38	29	51	36	52	22	44	44	316
Visual	28	38	31	43	30	30	32	31	263
Tactile	0	1	1	3	1	3	0	0	9
Kinesthetic	0	3	2	9	2	0	0	1	17
Group	23	21	32	28	37	21	22	14	198
Individual	43	50	53	63	48	34	54	62	407
Sum	66	71	85	91	85	55	76	76	605
Panel B: Percentages of Activity Types within the Textbooks									
Type	T1	T2	T3	T4	T5	T6	T7	T8	Sum
Auditory	58%	41%	60%	40%	61%	40%	58%	58%	52%
Visual	42%	54%	36%	47%	35%	55%	42%	41%	44%
Tactile	0%	1%	1%	3%	1%	5%	0%	0%	2%
Kinesthetic	0%	4%	2%	10%	2%	0%	0%	1%	3%
Group	35%	30%	38%	31%	44%	38%	29%	18%	33%
Individual	65%	70%	62%	69%	56%	62%	71%	82%	67%

* T1: Chunjaegyoyuk Publishing, T2: Didimdol Publishing, T3: Doosan Donga Publishing, T4: Neungryul Publishing, T5: Gihaksa Publishing, T6: Gumsung Publishing, T7: Gyohaksa Publishing and T8: Koryeo Publishing

Table 5 compares student perceptual learning styles and textbook activity types. The raw numbers for student learning styles are derived from the average scores from Table 2, as follows. Table 2 shows that the average scores on auditory, visual, tactile, and kinesthetic, are 38.5, 33.6, 34.0, and 34.8, which sum to 140.9. Then, the average score on auditory style, 38.5, is 27.3% of 140.9. The figures for the other learning styles are evaluated similarly. As to group and individual, since Table 2 shows that the average scores are 33.1 and 31.8, respectively, the average score on group style, 33.1, is 51% of the sum, 64.9, while that for individual is 49% of the sum. The raw numbers for textbook activity type are from the last column in Panel B of Table 4. The raw numbers indicate that while perceptual learning preferences reported by the students vary modestly across the learning styles, textbooks employ predominantly auditory and visual type activities. With respect to group

and individual, students are almost equal in their preferences, while textbooks use individual type activities almost twice as often as group type activities.

While the first two columns show the raw numbers, the next two show the order of preference of these numbers within each group. Auditory is the most preferred learning style of the students, and it is the most employed activity type by the textbooks. On the other hand, visual ranks number 4 among student learning styles, but ranks number 2 in textbook activity types. What is interesting is that preferences of kinesthetic and tactile activities are second and third behind auditory style, but they are least employed in the textbooks. Additionally, even though the students slightly prefer group style to individual, individual activities appear more than twice as many times as group activities in the textbooks. These results indicate that the activity types in Korean middle school EFL textbooks are somewhat misaligned with the students' preferences for learning styles.

TABLE 5
Comparison between Student Preferred Learning Styles and Textbook Activity Types

	Raw Numbers		Order of Preference	
	Student Learning Style	Textbook Activity type	Student Learning Style	Textbook Activity type
Auditory	27.3%	52%	1	1
Visual	23.8%	44%	4	2
Tactile	24.1%	2%	3	4
Kinesthetic	24.7%	3%	2	3
Group	51%	33%	1	2
Individual	49%	67%	2	1

Figure 1 shows the differences in student learning styles and textbook activities shown in Table 5. This figure shows graphically the significant mismatch between student learning styles and activity types presented in the textbooks. While the average scores for student learning styles vary modestly over perceptual learning styles, textbook activity types vary greatly. Textbook activities are dominated by auditory and visual types with close to zero representation of tactile and kinesthetic types.

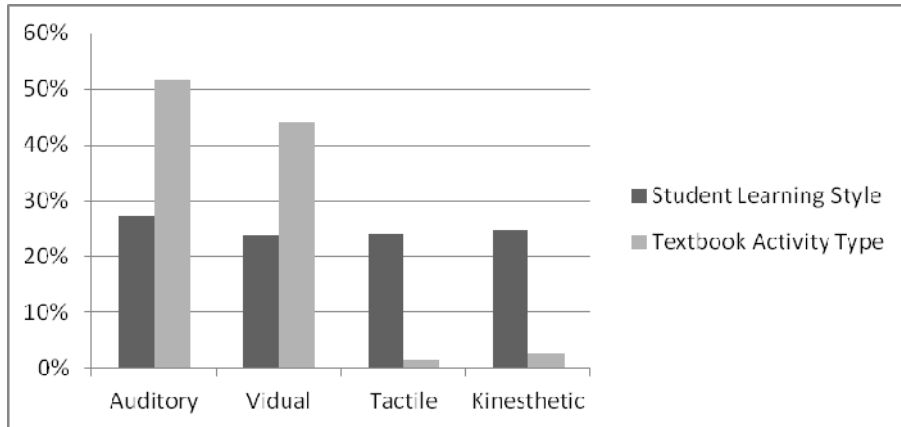


FIGURE 1 Student Learning Styles and Textbook Activities

Figure 2 shows the proportion of activity types employed by the textbooks examined in this study compared to the proportion of perceptual learning styles reported by the students. The proportions of student learning styles are from the first column in Table 3. The proportions for student style preference are 27.3% for auditory, 23.8% for visual, 24.1% for tactical, and 24.7% for kinesthetic. This figure graphically shows the degree of misalignment of textbook activities with student learning styles. Even though the proportions do not vary much across the student learning styles, all the textbooks use auditory and visual activities predominantly. Tactical and kinesthetic activities are significantly less used.

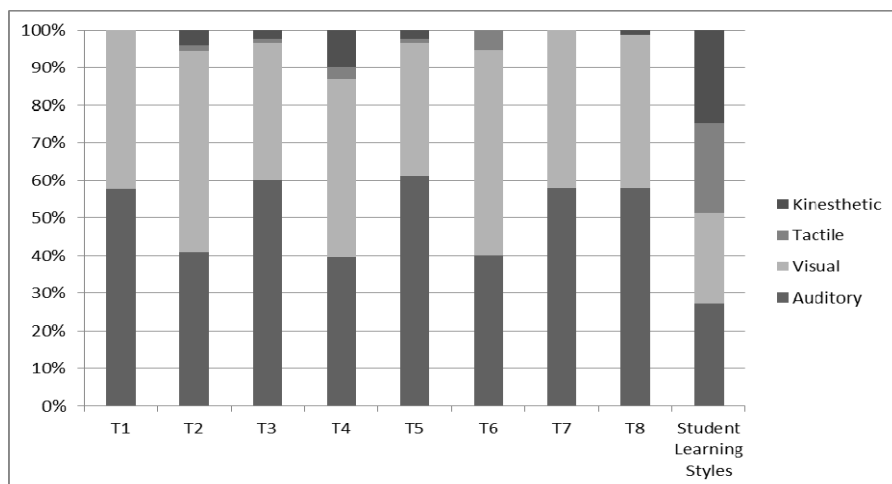


FIGURE 2 Proportion of Textbook Activity Types and Student Learning Styles

The results from the present study can be discussed with reference to the results from previous perceptual learning style research. Previous studies reported that Korean students appeared to have multiple preferences for perceptual learning styles (K. J. Kim, 2007; C. C. Park, 2002; Reid, 1987). In particular, in terms of four basic perceptual styles of auditory, visual, kinesthetic, and tactile learning, Reid (1987), in her research with Korean students enrolled in university-affiliated intensive English language programs, showed that Korean students appeared to have multiple preferences for visual, auditory, kinesthetic, and tactile as major learning styles; however, visual learning was reported more strongly than other learning styles. Likewise, C. C. Park's (2002) comparative study of Asian American students in secondary schools indicated that Korean students chose multiple minor learning style preferences, and their selection of learning styles are in the order of auditory, tactile, visual, and kinesthetic. The researcher pointed out that the students exhibited no preferences for major learning styles, and the students showed auditory learning as the most preferred learning style. On the other hand, K. J. Kim (2007) found that Korean students attending a Korean college demonstrated major preferences for all six learning styles. According to K. J. Kim's findings, the students showed higher preference for auditory learning than visual learning. As shown above, even though the findings of the present study are not consistent with those reported by previous studies in some aspects, the findings of the present study are quite similar to those of previous studies regarding Korean students' characteristics of multiple perceptual learning style preferences. Moreover, the present study confirms the findings of previous studies that Korean students have a higher preference for auditory learning among four basic perceptual learning styles.

As to the learning styles for group and individual, in Reid (1987) showed that Korean ESL students in her study expressed a negative preference for group learning, but a minor preference for individual learning. Likewise, in C. C. Park's (2002) study, Korean secondary students attending schools in the U.S. chose group learning as a negative style and individual learning as a minor style. This means the students may have learning difficulty in group learning. However, K. J. Kim (2007) reported that Korean EFL students showed the most preference for group learning, but the least for individual learning among major styles they chose. Korean students in the present study also preferred group learning while they preferred individual learning less even though the students showed little differences in preferences between these styles as minor. In light of the findings of studies discussed above, it is revealed that Korean students studying at education settings in the U.S. preferred individual learning while they preferred group learning less. On the other hand, Korean EFL students preferred group learning while they showed less preference for individual learning.

Table 6 summarizes the findings of the previous studies and the current one on the learning style preferences of Korean students. In sum, the results show that Korean

students are characterized to exhibit preferences for multiple learning styles and to show a higher preference for auditory learning. Therefore, it is necessary that these learning preferences are incorporated into classroom learning environment. However, the examinations of this paper on the selected EFL textbooks reveal that the activity types employed by the textbooks are not properly aligned with the students' learning preferences. The textbooks have some rooms to improve in this regard.

TABLE 6
Korean Students' Perceptual Learning Style Preference

Researcher	Student	Four basic perceptual styles*	Group or Individual
Reid	Korean ESL students in university-affiliated intensive programs in the U.S.	Multiple preferences for visual, auditory, kinesthetic, and tactile as major learning styles	A negative preference for group learning; a minor for individual learning
C. C. Park	Korean students in secondary schools in the U.S.	Multiple preferences for auditory, tactile, visual, and kinesthetic as minor learning styles	A negative preference for group learning; a minor for individual learning
K. J. Kim	Korean college EFL students	Multiple preferences for auditory, tactile, kinesthetic, and visual as major learning styles	The most preference for group learning; the least for individual learning among major styles the students chose
Y. S. Lee	Korean secondary school EFL students	Preferences for auditory as a major; multiple preferences for kinesthetic, tactile, and visual as minor learning styles.	More preference for group learning; less preference for individual learning among minor styles the students' chose

* Preferences are shown in the order of students' choice.

V. CONCLUSION AND IMPLICATION

The results of the present study reveal that Korean middle school EFL students' learning style preferences are inappropriately incorporated into the activities used in Korean middle school EFL textbooks. Even though the textbooks sufficiently employ auditory activities that are relevant to the students' major preference in learning style, the textbooks are not properly provided with other types of activities that incorporate the students' multiple preferences for learning styles such as kinesthetic, tactile, and group.

According to the findings from the present study, the students are likely to take advantage of auditory activities which are relatively dominant in the textbooks. However, since the students exhibit the multiple preferences for visual, kinesthetic, tactile, group, and individual learning, they can possibly take opportunities to learn in a number of ways if they are provided with multiple types of activities in L2 classes. That is, “the students who show the mixed modalities of perceptual learning styles can take more chances to perform well than those with a single modality of learning style” (Felder & Henriques, 1995, p. 64).

Based upon the findings of the present study, as long as the textbooks remain insufficient in incorporating students learning preferences, it is the L2 teachers that need to play a critical role to make up the gap between students’ learning preferences and textbook activities. Most of all, L2 teachers should plan to provide effective instructions for their students and facilitate their students’ performance. That is, when it is necessary, teachers can modify activity types by combining the modalities. For example, teachers could have students engage in a role playing activity or draw pictures for a class presentation in order to use what students practice by auditory activities. In this way, students are required to use physical movements and learn in experiential and interactive environment.

In addition, educators and textbook publishers need to be aware of Korean middle school EFL students’ characteristic learning styles such as multiple learning style preferences, and develop instructional activities and design curricular materials from the perspective of learning styles. For example, whole body involvement or total physical response activities could be employed more frequently for the students. Such activities as playing games or hands on activities provide students with opportunities to practice English during classes; furthermore, these activities could facilitate students’ use of new information from auditory or visual learning. This will help the students achieve communicative competences, which is the goal of current middle school English curriculum, by improving the learning environment in which the EFL education is mostly limited by classroom use. As a result, the English textbooks can function better as the major teaching and learning material in Korean middle school EFL classes, providing positive impacts on students’ performance.

From the pedagogical perspective, considering the students’ success and achievement in the context of L2 learning, it is generally believed that classroom practices incorporating students’ differences in learning styles reinforce the activation of a learner-centered principle (Nunan, 2003). Since students in a learner-centered classroom are expected to participate in their own learning process, they should have opportunities to use their own styles for learning.

The insights gained by this study may be effectively translated into the practice of language teaching; however, as a case study, the results from this study may not be generalized. Currently there is a lack of research on Korean EFL textbooks with regard to

learning styles. More comprehensive research based on a larger group of students of various grade levels and their textbooks and EFL materials should be undertaken in order to develop more effective learning environment. The results drawn by such quantitative research may then be used for improvement plans or suggestions for EFL textbooks. In addition, this study does not take the textbook activities' levels of difficulties into account. Considering these can help improve properly incorporate learning styles into textbooks. The extensions of this study in these directions are beyond the scope of this study and are left for future study.

REFERENCES

- Alfonseca, E., Carro, R. M., Martin, E., Ortigosa, A., & Paredes, P. (2006). The impact of learning styles on student grouping for collaborative learning: A case study. *User Modeling and User-Adapted Interaction, 16*, 377-401.
- Bailey, P., Onwuegbuzie, A., & Daley, C. E. (2000). Using learning style to predict foreign language achievement at the college level. *System, 28*, 115-133.
- Braio, C. A., Beasley, M., Dunn, R., Quinn, P., & Buchanan, K. (1997). Incremental implementation of learning-style strategies among urban low achievers. *The Journal of Educational Research, 91*, 15-25.
- Cha, K. W. (2003). An analysis of listening activities in Korean middle school English textbooks. *English Teaching, 58*(1), 3-15.
- Chang, Young-Hee, Chung, So-Young, Lee, Kyoung-Tae, Lee, Jung-Eun, Kim, Youn-Kyoung, & Roszell, W. (2009). *Middle School English 2*. Seoul: Neungryul Publishing.
- Chen, M. (2009). Influence of grade level on perceptual learning style preferences and language learning strategies of Taiwanese English as a foreign language learners. *Learning and Individual Differences, 19*, 304-308.
- Dörnyei, Z., & Skehan, P. (2008). Individual differences in second language learning. In C. J. Doughty and M. H. Long (Eds.), *The Handbook of Second Language Acquisition* (pp. 589- 629). Oxford, UK: Blackwell.
- Ehrman, M. (1996). *Understanding second language learning difficulties*. Thousand Oaks, California: Sage Publications.
- Ehrman, M., & Oxford, R. L. (1990). Adult language learning styles and strategies in an intensive training setting. *The Modern Language Journal, 74*, 311- 327.
- Ehrman, M., Leaver, B. L., & Oxford, R. L. (2003). A brief overview of individual differences in second language learning. *System, 31*, 313-330.

- Ellis, R. (2004). Individual differences in second language learning. In A. Davies & C. Elder (Eds.), *The Handbook of Applied Linguistics* (pp. 525- 551). Oxford, UK: Blackwell.
- Felder, R. M., & Henriques, E. R. (1995). Learning and teaching styles in foreign and second language education. *Foreign Language Annals*, 28(1), 21-31.
- Gardner, H., & Hatch, T. (1989). Educational implications of theory of multiple intelligences. *Educational Research*, 18(4), 4-9.
- Hilberg, S., & Tharp, R. (2002). Theoretical perspectives, research findings, and classroom implications of the learning styles of American Indian and Alaska native students. *The ERIC Digest*, EDO-RC-02-3, September.
- Honigsfeld, A., & Dunn, R. (2003). High school male and female learning-style similarities and differences in diverse nations. *Journal of Educational Research*, 96 (4), 195- 206.
- Hyland, K. (1993). Culture and learning: A study of the learning style preferences of Japanese students. *RELC Journal*, 24(2), 69-91.
- Johnson, B. (1992). *Approaches to research in second language learning*. New York: Longman.
- Kim, Im-Deuk, Ko, Kyoung-Suk, Lee, Byung-Hoon, Kim, Ki-Ho, Lee, Hyun-Joo, Paik, Nam-Ki, Song, Jae-Hoon, Chang, Eun-Kyoung, Kim Hyun-Wha, Kim, Young-Sun, & Edward, Sharp William. (2009). *Middle School English 2*. Seoul: Gyohaksa Publishing.
- Kim, Kyung-Ja. (2007). An examination of the psychometric properties of the PLSPQ for Korean EFL college students. *Foreign Languages Education*, 14(2), 133-157.
- Kim, Sung-Gon, Youn, Jung-Mi, Song, Mi-Jung, Moon, Do-Sik, Choi, Eun-Koyung, Yum, Mi-sun, & Hass, Johanna L. (2009). *Middle School English 2*. Seoul: Doosan Donga Publishing.
- Kim, Yong-Jin, Hong, Wan-Ki, Chang, Sa-Yeol, Yang, Mi-Ra, Kang, Yoon-Hee, Ko, & Hyo-Wan. (2009). *Middle School English 2*. Seoul: Didimdol Publishing.
- Kim, Yoon-Kyoung, & Kim, Tae-Young. (2011). The effect of Korean secondary school students' perceptual learning styles and ideal L2 self on motivated L2 behavior and English proficiency. *Korean Journal of English Language and Linguistics*, 11(1), 21-42.
- Kinsella, K. (1995). Understanding and empowering diverse learners in ESL classrooms. In J. M. Reid (Ed.), *Learning styles in the ESL/EFL classroom* (pp. 170-194). Boston: Heinle & Heinle.
- Kolb, A., & Kolb, D. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Experience-Based Learning Systems*, 4(2), 193-212.

- Kozhevnikov, M. (2007). Cognitive styles in the context of modern psychology: Toward an integrated framework of cognitive style psychological bulletin copyright. *The American Psychological Association*, 133(3), 464-481.
- Kroonenberg, N. (1995). Meeting language learners' sensory-learning-style preferences. In J. M. Reid (Ed.), *Learning styles in the ESL/EFL classroom* (pp. 74-86). Boston: Heinle & Heinle.
- Kwon, O-Ryang, Oh, Sun-Young, Kim, Ji-Min, Chung, Woon-Kyoung, Park, Ji-won, & Gary, Edward R. (2009). *Middle School English 2*. Seoul: Gumsung Publishing.
- Lawrence, G. (1993). *People types and tiger stripes*. Gainesville, FL: Center for Applications of Psychological Type.
- Lee, Byoung-Geon, Hong, Ik-Pyo, Bae, Hee-Wook, Ko, Jung-Eun, Hong, Yoon-Bin, & Edward, Gilbertson Denis. (2009). *Middle School English 2*. Seoul: Koryeo Publishing.
- Lee, Da-Mi, Kim, Kyoung-Whan, Chang, Young-Joon, Han, Ho, Lee, Jung-Wha, Ko, Mi-Ra, & Lee, Soo-Ryul. (2009). *Middle School English 2*. Seoul: Gihaksa Publishing.
- Lee, Jae-Young, Seo, Sung-Ki, Moon, An-Na, Bae, Tai-Il, Kim, Shin-Hei, Choi, A-Jung, & Keller, Daniel Ryan. (2009). *Middle School English 2*. Seoul: Chunjaegyoyuk Publishing.
- Liu, N., & Littlewood, W. (1997). Why do many students appear reluctant to participate in classroom learning discourse? *System*, 25, 371-384.
- McLoughlin, C. (1999). The implications of the research literature on learning styles for the design of instructional material. *Australian Journal of Educational Technology*, 15(3), 222-241.
- Montgomery S. M., & Groat, L. N. (1998). Student learning styles and their implications for teaching. *CRLT Occasional Papers*, 10, 1-8.
- Naimie, Z., Siraj, S., Piaw, C. Y., Shagholi, R., & Abuzaid, R. A. (2010). Do you think your match is made in heaven? Teaching styles/learning styles match and mismatch revisited. *Procedia Social and Behavioral Sciences*, 2, 349-353.
- Nielsen, T. (2008). Implementation of learning styles at the teacher level. *Education + Training*, 50(2), 155-166.
- Nunan, D. (2003). *Practical English language teaching*. New York: McGraw Hill.
- Oxford, R. L. (2003a). Language learning styles and strategies: Concepts and relationships. *IRAL*, 41, 271-278.
- Oxford, R. L. (2003b). Language learning styles and strategies: An overview. *GALA*, 1-25.
- Park, Clara. C. (2002). Crosscultural differences in learning styles of secondary English learners. *Bilingual Research Journal*, 26(2), 213-229.

- Park, Ja-Young. (2008). *A study of Korean middle school students' personality and preference styles for activity types in EFL textbooks: From Jung's personality types theory*. Unpublished master's thesis. Korea University, Seoul.
- Peacock, M. (2001). Match or mismatch? Learning styles and teaching styles in EFL. *International Journal of Applied Linguistics*, 11(1), 1-19.
- Peck, S. (1995). Learning styles and elementary school ESL. In J. M. Reid (Ed.), *Learning styles in the ESL/EFL classroom* (pp. 128-133). Boston: Heinle & Heinle.
- Psaltou-Joycey, A., & Kantaridou, Z. (2011). Major, minor, and negative learning style preferences of university students. *System*, 39, 103-112.
- Reid, J. M. (1987). The learning style preferences of ESL students. *TESOL Quarterly*, 21, 87-111.
- Reid, J. M. (1995). (Eds.). *Learning styles in the ESL/EFL classroom*. Boston: Heinle & Heinle.
- Riding, R., & Grimley, M. (1999). Cognitive style, gender and learning from multi-media materials in 11-year-old children. *British Journal of Educational Technology*, 30(1), 43-56.
- Rogers, K. M. A. (2009). A preliminary investigation and analysis of student learning style preferences. *Journal of Further and Higher Education*, 33(1), 13-21.
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford; New York: Oxford University Press.
- Spada, N., Barkaoui, K., Peters, C., So, M., & Valeoet, A. (2009) Developing a questionnaire to investigate second language learners' preferences for two types of form-focused instruction. *System*, 37, 70-81.
- Stebbins, C. (1995). Cultural-specific perceptual preferences of post-secondary students of English as a second language. In J. M. Reid (Ed.), *Learning styles in the ESL/EFL classroom* (pp. 109-117). Boston: Heinle & Heinle.
- Violand-Sanchez, E. (1995). Cognitive and learning styles of high school students: Implications for ESL curriculum development. In J. M. Reid (Ed.), *Learning styles in the ESL/EFL classroom* (pp. 48-62). Boston: Heinle & Heinle.
- Wintergerst, A., DeCapua, A., & Verna, A. (2003). Conceptualizing learning style modalities for ESL/EFL students. *System*, 31, 85-106.
- Wong, L., & Nunan, D. (2011). The learning styles and strategies of effective language learners. *System*, 39, 144-163.

Examples in: English

Applicable Languages: English

Applicable Levels: Secondary

Yang-Sook Lee
Dept. of English Language Education
Graduate School Korea University
145, Anam-ro, Seongbuk-gu
Seoul 136-701, Korea
Tel: (02) 944-5194/ C.P.: 011-9366-6020
E-mail: yangsook_cho@hotmail.com

Received 15 March 2013

Revised 29 April 2013

Accepted 18 May 2013