Comparison of L2 Listening and Reading Comprehension Strategies: A Case Study of Three Middle School Students

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≪SUMMARY≫

This study is a comparison study of the listening and reading strategic behaviors of middle school students involved in a case study. Three middle school students participated in this study. Several group interviews were used to collect verbal data on listening and reading processes as well as listening and reading strategies. In addition to the group interviews, listening and reading questionnaires were used to collect additional data on strategic behaviors in the two different modes. Strategies were coded and tabulated, and the mean and percentage of frequency were used to render a strategy profile of each mode for each participant. The results of this study support the view of a dual process. There were similarities and dissimilarities in the use of strategies as the mode varied. The level of a participant's proficiency also affected their strategic behaviors as the mode changed. Overall, participants used more strategies while reading than while listening. A highly proficient participant in this study used top-down strategies more regardless of the modality whereas the other participants showed the opposite pattern. The results also revealed some difference in the use of modality-specific strategies: the highly proficient participant used more cognitive strategies while listening and more compensation and metacognitive strategies while reading. A greater variety of strategies were used while reading than while listening.

Key Words : cognitive/compensation/metacognitive strategies, top-down/bottom-up strategies, proficiency level, listening/reading processes language learning questions

I. Introduction

Many studies have been conducted to verify the relationship between the two receptive skills (listening and reading). They are viewed theoretically as active processes which require two language processes: decoding and comprehension (O'Malley & Chamot, 1990). Decoding requires one to percept or process an acoustic or printed input into a language unit, and comprehension requires the creation of meaning based on the decoded input and on learners' prior knowledge (Danks, 1980, cited in Park 2005).

Much research assumes that the cognitive processes and the mental representations of the two receptive skills are identical (Danks, 1980; Perfetti, 1985; Sanders, 1977; Sinatra, 1990; Sticht, Beck, Hanky, Kleiman, & James, 1974). Both in listening and reading comprehension, learners need to decode the linguistic input rapidly and accurately and to use background knowledge for interpretation. This unitary process view suggests that the skills and strategies learned in listening can be transferred in reading, or vice versa. However, the dual process view has recently garnered great interest from many researchers (Brown, 1994; Kwon, 2005; Lund, 1991; Murphy, 1996; Mecartty, 2000; Nunan 1991b; Park, 2004; Thompson, 1995). Though listening and reading share some similarities, there are essential differences between these receptive skills. While the general comprehension processes are identical, how the use of strategies and the sub-processing of comprehension vary as the mode varies.

According to Lund (1991), the modality of the stimulus materials and linguistic knowledge render differences in comprehension. There were strategic differences in the use of both processes. For example, L2 readers recalled more propositions and details than did L2 listeners, while L2 listeners recalled more main ideas and performed better when inventing a proper context for a conversation than did L2 readers. Thus, he argued that L2 listeners use more top-down processes compared to L2 readers. Flowerdew (1994b), Murphy (1996), Rost (1990), and Thompson (1995) posit distinctive features of reading and listening comprehension; these features are grouped into the following categories: discourse-organization considerations, lexico-grammatical characteristics, physical features of respective message signals, message availability to listeners and readers, pacing as controlled by speakers or readers, modality-specific strategies used by L2 learners, relative qualities of learner comprehension, and contrastive paralinguitic supports. Other studies (Reves & Levine, 1988; Mecartty, 2000) reported that lexical knowledge was more related to reading comprehension, possibly explaining the large amounts of variance associated with reading

comprehension.

Recent research also investigated the dissimilarities of reading and listening comprehension. Park (2004) shows that L2 learners used their linguistic knowledge, background knowledge, global strategies, and local strategies differently in L2 reading and listening comprehension. His study found that L2 learners used more global strategies for listening comprehension and used more local strategies for reading comprehension. According to Kwon (2005), there is a correlation between learners' strategy use and reading and listening comprehension. L2 learners used direct strategies more for reading comprehension and indirect strategies more for listening comprehension.

It is important for teachers to know more about what students actually do, as well as what they should be doing in order to teach more effectively. In this sense understanding the similarities and differences between L2 reading and listening comprehension benefits teachers, students and material developers. The various studies outlined above suggest that the comprehension processes of both receptive skills are identical, but that the performance of sub-skills and the application behavior of learning strategies differ with modality. Thus, different instructional techniques considering different focal points of tasks, sub-skills and strategies should be applied as the mode varies. However, previous studies lack in terms of the application of these sub-skills or tactics and in how strategic behaviors differ with modality. To be more precise, the strategies or tactics commonly used in the two receptive skills, as well as how these strategies are used according to proficiency level as the skill mode varies are not sufficiently discussed and do not offer a clear picture of the relationship between L2 listening and reading processes. In addition, the strategic behavior of younger students was relatively under reported; thus, to have an overall view of strategic behavior, studies in relation to the strategic behaviors of younger students are needed. Middle school students are the youngest students from whom the strategic behaviors of two skills can be observed, as elementary students in Korea focus on learning L2 oral skills.

For this reason, the present study focuses on clarifying the relationship between listening and reading strategies used by Korean middle school students in their listening and reading comprehension processes. In other words, this study aims to provide descriptive information concerning different strategic behaviors with modality and seeks to determine the frequency of strategy use with modality. Interviews and surveys were used to answer the following questions:

Q1. What are the typical and atypical strategies that are used during the listening and reading comprehension processes? Which strategies are used more often in both processes? Which are used less? Are there any significant differences in terms of the frequency of the use of strategies

between the listening and reading processes?

Q2. Does the proficiency level of participants affect the use of strategies of the two receptive skills? How does it affect the use of strategies with the modality?

Ⅱ. Literature Review

1. L2 Listening and Reading Comprehension Processes

It has been considered that listening and reading are receptive skills that can be explained efficiently by the interactive process model. This model involves elements of both bottom-up and top-down models (Buck, 2001; Carrell, 1988; Dubin & Bycina, 1991; Morley, 1991; Nunan, 2003). Various types of knowledge are required in order to understand language; thus, listening and reading comprehension is the result of interactions among aural or visual input, different types of linguistic knowledge, and context and background knowledge. Learners use any information in any order or simultaneously to compensate for deficiencies in order to interpret messages. A number of studies have reported that skilled listeners and readers are those who can efficiently integrate the bottom-up processes with top-down processes (Carrell, 1987, 1988; Liontas, 1999).

Compared to L1 research on the subject of the relationship between listening and reading comprehension processes, a relatively small amount of research has been conducted as this pertains to L2. However, based on what previous research there is, there are two traditional views regarding this issue: the unitary comprehension model and the dual comprehension model. Both models suggest decoding and comprehension as two aspects of the receptive language process. They agree in terms of the differences in decoding but disagree in terms of the nature of comprehension in the two modalities. The unitary model suggests identical comprehension processes for both modalities. For example, Royer (1985) suggests that the two processes converge at the syntactic level and Sinatra (1990) contends that they converge at the word level. According to Smith (1994), the method in which reader brings meaning to print is similar to the way that listeners interpret speech. Hirai (1999) argues that L2 reading and listening comprehension are interdependent, or that they share a similar process. Thus, according to her, knowledge from one skill can transfer to the other.

In contrast, the dual model suggests some important differences and similarities. While the

comprehension processes of these two receptive skills are identical, the sub-processes or the application of strategies differ with the modalities as well as with a person's linguistic competence. According to Sticht and James (1984), children, who are still learning to read, perform on listening tasks better and adults perform on reading tasks better. Qualitative studies (Hildyard & Olsen, 1978, 1982; Kintsch & Kozminsky 1977; Walker, 1976) suggests that listeners rely more on top-down process than do readers; they found more idiosyncratic responses, less accurate recall, more reporting of ideas, and a greater recognition of central inferences. However, there were no differences in the modalities on the recall of ideas at different levels of importance or from different structural parts of a story (Kintsch & Kozminsky 1977). Hildyard and Olsen (1978) found that readers recognize correct details more than central concepts and inferences while listeners excelled in their recognition of detail.

Lund (1991) and Reves and Levine (1988) reported differences in performance due to stimulus input and different linguistic knowledge. Lund (1991) concluded that while the general processes between reading and listening are identical, readers recalled more propositions and details and listeners recalled more higher-order ideas and produced more creative constructions. Reves and Levine (1988) suggested that recognition of lexical items was more closely related to reading comprehension than to listening comprehension. Mecartty (2000) also reported various similarities and differences. Mecartty found that grammatical knowledge is related only to reading comprehension whereas lexical knowledge is related to both reading and listening comprehension. However, according to Mecartty's study, lexical knowledge explains a greater proportion of variance in reading than listening.

Bae and Bachman (1998) and Park (2004) also investigated some differences in performance. Bae and Bachman (1998) reported that listening and reading are separable skills though they share a considerable amount of common variance. Park (2004) also argues that the two skills have distinctive modalities. His study empirically showed that the use of linguistic and background knowledge in addition to the use of global and local strategies differ among students performing L2 listening and reading comprehension tasks.

2. L2 Strategy Behaviors in Listening and Reading Processes

Numerous studies have been conducted regarding listening and reading strategies and how learners use them (Bacon, 1992; O'Malley, Chamot & Kupper, 1989; Oxford, 1993; Paterson, 2001; Peters, 1999; Pressley & Afflerbach, 1995; Pressley, Brown, El-Dinary, & Afflerbach, 1995;

Vandergrift, 1997a, 1997b, 1998; Vogely, 1995; Wallace, 2001; Wyatt, Pressley, El-Dinary, Stein, Evans, & Brown, 1993). Taken as a whole, the results of these studies suggest that listening and reading strategies improve learners' comprehension and thus enhance learners' language proficiency. The results also suggest that these strategies can and should be taught to learners in order to enhance their language skills. According to Oxford (1990), there are six different categories of language learning strategies: memory, cognitive, compensation, metacognitive, affective and social strategies. There is a view that memory strategies can occasionally be merged with cognitive strategies and that affective and social strategies can be combined under the name of socioeffective strategies (Vandergrift, 1997).

Many researchers have found that successful readers or listeners use many and various types of strategies, and that they have ability to know when to use which strategy more effectively. Murphy (1986, 1987) and Bacon (1992a, 1992b) argued that more successful listeners used a more specific strategy, in addition to a wider variety of strategies overall. Bacon also reported that proficient listeners can change strategies and alter their motivation, self-control, maintenance of attention and effective use of background knowledge flexibly. O'Malley, Chamot and Kupper (1989) found that more proficient listeners used self-monitoring, elaboration, and inferencing more. Defilippies (1980) reported that more proficient listeners were better at organizing auditory input and that less proficient listeners used translating and key word strategies more. Vandergrift (1993, 1997b) also found that less proficient listeners used translating heavily whereas more proficient listeners used more metacognitive strategies. Rost and Ross (1991) also found that more proficient listeners used inference and continuation signals while less proficient listeners used lexical and global reprise. Moreira (1996) and Vandergrift (1996) showed that metacognitive, cognitive and socioeffective strategies are commonly found regardless of students' proficiency level. Maeng (2006b, 2006c) found that young Korean learners also used identical strategies regardless of their proficiency level (cognitive, compensation, metacognitive and affective). However, according to her study, they differ in the frequency of their use of strategies in that more proficient listeners used more strategies.

Good readers use various types of reading strategies in a purposeful manner such as setting goals, varying reading style according to the text, making predictions, paraphrasing, interpreting, summarizing and concluding (Pressley & Afflerbach, 1995; Pressley et al., 1995; Wallace, 2001; Wyatt et al., 1993). Good readers often self-correct, improve, or modify their hypothesis in order to comprehend. They tend to use more global strategies whereas poor readers often rely on local strategies for comprehension (Block, 1992). Anderson (1984), Maeng (2006a), and Song (1999) found a linear relationship between strategic behaviors and L2 proficiency level. Maeng (2006a)

reported more proficient readers used cognitive, compensate and metacognitive strategies more frequently and evenly at all three reading stages while less proficient readers used these strategies least often and used them unevenly. Anderson (1991, 1999) also mentioned that readers who use more reading strategies comprehend better.

Park (2005) argued that local questions are significantly more difficult in listening comprehension tests and that global questions are significantly more difficult in reading comprehension tests. Analyzing his results, he suggested that L2 listeners and readers use different strategies according to their linguistic and background knowledge for local and global questions, respectively. Kwon (2005) showed that types of learning strategies are related to listening and reading comprehension. Listeners and readers were found to use many common strategies but differed in the sense that readers use more direct strategies compared to listeners. She also found that strategy could explain the variance in listening comprehension much more than it could in reading comprehension.

However, these previous studies (Kwon, 2005; Lundi, 1991; Mecartty, 2000; Park, 2004) have number of limitations: The first is that a split-design study compared comprehension levels of two distinct groups of participants rather than the same ones. Second, the language proficiency of participants, in that it greatly affects language learning, was not adequately discussed along with a comparison of two receptive skills. Third, descriptive information regarding how knowledge or strategies are used differently for the two skills was not given in sufficient detail. Additionally, the majority of past studies involved subjects who were high-school students or university-level students. Therefore, in order to create a complete picture of the strategic behaviors of L2 learners, a study that addresses the above limitations is needed.

Ⅲ. Method

1. Participants

Three female students participated in this study. At the time of this study, they were middle school students in Korea: one in the 7th grade and two in the 9th grade. All started to learn English when they were in the third grade in Korea. Age is not controlled in this study as previous studies (Harley, 2000; Maeng, 2006c) showed no age-related differences related to strategic behavior. However, gender is controlled given that several studies (Vandergrift, 1996;

Bacon 1992a, b; Maeng, 2006b) have found a gender-related effect.

Participants have a regular English class four times each week at their middle school. All participants except participant A had no schooling or learning experience in an English-speaking country. Participant A was educated during her 5th and 6th grade in the United States. Participants B, and C had experience learning English with a native English teacher at a private language institution in addition to their regular English classes at school. All except participant A at the time of the study also studied English with a private tutor twice a week after school (the same person for each participant). This tutor taught English that focused more on English grammar and reading comprehension and less on listening comprehension. Participant B also goes to another language institution where she studies English mainly using a TOEFL preparation book that focuses more on listening comprehension.

〈TABLE 1〉 Participants' English Proficiency

Participant (Female)	Grade	SLEPT Raw Score			
		Listening	Reading	Total	Level
A	7th	70/75	59/75	129/150	H
B	9th	61/75	58/75	119/150	M
C	9th	50/75	45/75	95/150	L

<Table 1> shows the English proficiency level for each participant. The three participants can be placed into three relative levels: High, Middle, and Low. Participant A mentioned that she likes listening much better than reading not because reading is more difficult than listening, according to her, but because she does not like reading itself. She also mentioned that she does not like to read in her L1. Participant C mentioned that she is more comfortable in reading than she is listening, as she can go back and forth when she thinks she doesn't understand the text; this is not possible if listening. Participant B mentioned that her preference varies according to the difficulty of the text. She mentioned that she prefers reading better when the text is difficult as she can go back and forth freely in an effort to understand the text.

Most of the participants had no experience learning listening strategies implicitly or explicitly. However, participant A had some experience learning a number of global reading strategies such as looking for main ideas, skimming, scanning, and using textual organization. The other participants also had some experience using reading strategies such as looking for main idea, skimming and scanning.

2. Materials and Procedure

The Secondary Level English Proficiency test (SLEPT), a group interview, and strategy questionnaires for listening and reading (LRSQ) were used for the purpose of this study. The result of the SLEPT was used to determine the level of each participant's English proficiency. There are total 150 multiple choice questions in SLEPT: 75 involving listening and 75 involving reading. The components of SLEPT test various types of language skills, including looking for gist, facts, and details and making inferences.

Due to the test-retest effect, different texts were used for reading and listening comprehension. In addition, given that this study focused on the behavior of strategy use in two different modes, it was deemed more important to consider a text level that was which is suitable for each respective participants' listening and reading ability. However, each comprehension test item included identical types of comprehension questions. The listening materials were composed of short dialogues, passages and conversations. Most of the listening materials were from the practice listening proficiency test for 9th grade, while two passages from SLEPT were used. A story and short passages were used for reading. The first part of the story (The boy who drew cats) was from the book Literature for English (intermediate two level) (McGraw Hill, 2005), and it was composed of 10 paragraphs. The other two passages were from SLEPT. There were 15 multiple-choice questions each for reading and listening comprehension: three questions related to looking for gist, two questions regarding finding facts, three questions about asking details, and seven questions concerning making inferences.

Group interviews were administrated in order to gather information about the participants' backgrounds and their reading and listening processes. Retrospective verbal data on their listening and reading processes and listening and reading strategies were collected using think-aloud techniques. Listening and reading strategy questionnaires were used to collect additional data regarding participants' strategic behaviors in the two different modes. The questionnaires required participants to respond to questions using a Likert-type scale: (1) never to (5) always. The listening questionnaire (LSQ) was redesigned based on the learning strategy used in Maeng's study (2006c), which was in turn based on Oxford (1990), Vandergrift (1997), and Goh (2002); the reading questionnaire (RSQ) was redesigned based on Maeng's study (2006a) which was in turn based on Pressely and colleagues (Pressley & Afflerbach, 1995; Pressley et al., 1995: Wyatt et al., 1993) and Anderson (1991, 1999). Questions were composed of four types of learning strategies: two direct strategies (cognitive, and compensation) and two indirect strategies

(metacognitive and affective). Among these, cognitive, compensation and metacognitive categories were analyzed. A total of 29 questions for each LSQ and RSQ were analyzed: twelve for the cognitive strategies (1-12), twelve for the compensation strategies (13-24), and five for the metacognitive strategies (24-29).

This study was administered during the students' summer vacation. Data were collected over three weeks. First, the SLEPT was administered to judge each participant's English proficiency level at the beginning of summer vacation. Second, a week after the SLEPT test, the first group interview was administered to gather participants background information and give them an opportunity to practice reporting their learning process verbally using the think-aloud technique. Following this, a second group interview was administered to collect listening data followed by a third group interview administered to collect reading data. Finally, the LSQ and RSQ were administered to collect additional data. Interviews were taped, transcribed, interpreted and coded. The investigator and a colleague coded the data independently. Intra-coder and inter-coder reliability coefficients were measured for the reliability of data interpretation (Goh, 2002; Young, 1997). These were found to be .83 and .78 respectively. Each coded report of a strategy was tabulated and percentage was used to show a strategy profile for each participant. The mean and percentage were also used to analyze the LSQ and RSQ.

Ⅳ. Results and Discussion

1. Group Interviews: Listening and Reading strategies

<Table 2> presents the definitions of the strategies reported in the study and <Table 3> shows an overview of the frequency of the listening and reading strategies used in major categories as reported in this study. Cognitive, compensation and metacognitive strategies were examined as listening and reading strategy categories. Overall, direct strategies were reported most frequently and a great number of various types of direct strategies were reported by all participants. Metacognitive strategies were least reported. Nine different cognitive strategies, eight different compensation strategies and three different metacognitive strategies were reported in this study. Three strategies (skimming/scanning, skipping and analyzing) within the cognitive strategy category as well as three strategies (using context, controlling the speed, and guessing blindly) within the

compensation strategy category were reported only for reading, whereas reconstructing within the cognitive strategy category and two strategies (using visual clues and taking notes) within the compensation strategy category were reported only for listening.

〈TABLE 2〉 Strategies and Their Definition

Strategy	Definition
Cognitive	
1. Translating	Converting a target expression into L1
2. Reconstructing (L)	Recreating meaning from words or phrase
3. Getting the idea quickly	Understanding the message rapidly and clearly
3-1. Skimming (R)	
3-2. Skipping (R)	
4. Reasoning deductively (R)	Using general rules and applying them to a new target language situation
5. Using resource (R)	Using target language reference materials such as dictionaries, or an encyclopedia.
6. Recognizing & retrieving patterns	Recognizing and reproducing what was heard
7. Analyzing	Applying specific rules or breaking expression down into parts in order to understand the message
Compensation	
8. Repeating	Listening/Reading to the materials several times
9. Inferencing (guessing)	
9-1. Using familiar content words	Using familiar words or phrases to interpret/guess the message
9-2. Drawing on knowledge of the world	Using world (nonlinguistic) knowledge to interpret/guess the message
9-3. Using context (R)	Using context to interpret/guess the message
9-4. Controlling speed (R)	Controlling speed to interpret the message
9-5. Guessing blindly (R)	Choosing anything
9-6. Using visual clues (L)	Using visual clues to interpret/guess the message
9-7. Taking notes (L)	Taking notes to recall important details
Metacognitive	
10. Selected attention	Paying attention or hearing familiar words
11. Evaluation	
11-1. Self-monitoring	Identifying errors in understanding
11-2. Self -evaluating	Checking comprehension or progress

1) Direct Strategies

According to Oxford (1990), direct strategies involve the mental processing of the language. There are three groups: memory, cognitive and compensation strategies. Among these strategies, only cognitive strategies and compensation strategies were reported as direct strategies in this study. Cognitive strategies are used to manipulate information in an effort to accomplish a task by storing and recalling. She suggests fifteen tactics under the cognitive strategy: getting the idea quickly, using resources, reasoning deductively, analyzing expressions, analyzing contrastively, translating, transferring, taking notes, summarizing, highlighting, repeating, formally practicing, recognizing and using formulas and patterns, recombining (reconstructing) and practice naturalistically.

Compensation strategies are used to make up for an inadequate repertoire of linguistic knowledge using linguistic clues and other clues. Inferencing (using linguistic clues and using other clues) is suggested as a specific tactic for the compensation strategy by Oxford (1990). While some researchers (Chamot, Kupper & Impink-Hernadez, 1988; O'Malley et al., 1985; Vandergrift, 1997) place the above tactics in the cognitive category. Anderson (1999) suggests that repeating and taking notes are the compensation strategies for reading. Based on this, the tactics of strategy in this study were categorized and guessing blindly was included as a new tactic.

<Table 3> shows the nine cognitive strategies and eight compensation strategies used by participants. Among the cognitive strategies, skimming, scanning and analyzing were used only while reading. Among the compensation strategies, using context, controlling the speed and guessing blindly were used only for reading, and using visual clues and taking notes were used only for listening.

〈TABLE 3〉 Frequency of Strategies Reported (%)

Strategy	Listening (Reading)		
	A (High)	C (Middle)	D (Low)
1. Translating	–	3.57 (10.53)	30 (12.5)
2. Reconstructing (L)	–	21.43	5
3. Getting idea quickly	26.67	3.57	–
3-1. Skimming/Scanning (R)	–	(7.69)	(12.5)/(4.16)
3-2. Skipping (R)	(6.66)	(3.84)	(4.17)
4. Reasoning deductively	(6.66)	–	–
5. Using resources	–	(7.69)	(8.33)
6. Recognizing & Retrieving Patterns	66.66	–	–
7. Analyzing (R)	–	(3.84)	(4.17)
Total: Cognitive	93.33 (13.32)	28.57 (34.61)	35 (45.84)

8.Repeating	(13.33)	(10.53)	(16.67)
9. Inferencing (Guessing)			
9-1. Using familiar content words	3.33	14.29(10.53)	10 (4.17)
9-2 Drawing on knowledge of the world	3.33 (20)	14.29 (3.84)	10 (4.17)
9-3 Using context (R)	(13.33)	(3.84)	5 (4.17)
9-4. Controlling speed (R)	(6.66)	(3.84)	(4.17)
9-5. Guessing blindly (R)	(6.66)	(3.84)	(4.17)
9-6. Using visual clues (L)	–	10.71	5
9-7. Taking notes (L)	–	–	5
Total: Compensation	6.67 (59.98)	39.29 (38.46)	35 (37.52)
10. Selected attention	–	25 (10.53)	30 (4.16)
11. Evaluating			
11-1 self-monitoring (R)	(13.35)	(3.84)	(4.16)
11-2. self-evaluating	(13.35)	7.14 (10.53)	(8.32)
Total: Metacognitive	(26.70)	32.14 (26.92)	30 (16.64)
Top-down	96.67(62.50)	25 (42.80)	35 (47.80)
Bottom-up	3.33 (37.50)	75 (57.20)	65 (52.20)

The highly proficient participant A appeared to use strategies differently with different modes. She used cognitive strategies heavily while listening but used compensation strategies more while reading. She also used a greater variety of compensation strategies for reading than for listening. Overall, she used top-down strategies more often than bottom-up strategies both for listening and reading, although she used more top-down strategies for listening compared to reading. However, participants B and C showed a similar frequency of the use of strategies in two different modes, although they differed in the use of different types of strategies with different modes. The mid-level participant B and the low-level participant C used cognitive strategies and compensation strategies with a similar frequency. Overall, they used bottom-up strategies more than top-down strategies both for listening and reading although they used more bottom-up strategies while listening than while reading. These results support the previous studies that found that high proficiency learners use more top-down strategies while listening and reading (Block, 1992; Carrell, 1983, 1988; Carrell & Eisterhold, 1983; Rost, 1990). However, these results partially support a previous study (Hildyard & Olsen, 1978, 1982; Kintsch & Kozminsky 1977; Waker, 1976; Park, 2004) that posits that listeners rely more on top-down strategies than do readers, as only the highly proficient participant used more top-down strategies for listening compared to reading.

The difference in strategic behavior with different modes appeared to occur even within the

difference of a participant's listening and reading ability. The highly proficient participant A with her greater listening ability compared to her reading ability used cognitive strategies, such as getting the ideas quickly, and recognizing and retrieving patterns, heavily whereas she didn't use any of these strategies while her reading. She used a variety of types of compensation strategies while reading, such as repeating, using familiar content words, drawing on knowledge of the world, using context, and controlling the speed, whereas she used only using familiar content words and drawing on knowledge of the world, and used these strategies less frequently while listening. However, a great difference was not found among the mid- and low-level participants' listening and reading abilities. In addition, the frequency of the use of cognitive and compensation strategies did not differ significantly, whereas there were slight differences in the use of different types of cognitive and compensation strategies with different modes.

Participant B used translation more for reading compared to listening, while participant C used this strategy more for listening than for reading. Participant B used reconstruction and getting the idea quickly. Participant C used the reconstruction strategy only for listening, whereas participant B and C used skimming, scanning, and analyzing only for reading. Participant B used using familiar content words and using visual clues only while listening; she reported repeating, using context, controlling the speed, and guessing blindly only for reading. Participant C used using visual clues and taking notes only for listening whereas she used controlling the speed and guessing blindly only for reading. Participants B and C used the same strategies more often while listening than while reading, on the occasions that they used the same strategies in both modes. However, participant A showed the opposite pattern. Overall, it appeared that learners used a greater number and variety of strategies to compensate for their deficiency in comprehension and to enhance their understanding, as mentioned in various studies (Buck, 2001; Carrell, 1987, 1988; Liontas, 1999; Nunan, 2003).

Essentially, translating is the strategy used by participants B and C; this strategy was used more heavily for listening by the low-level participant, as was found in other studies (Defilippies, 1980; Maeng, 2006b; Vandergrift, 1993, 1997b). Participant B mentioned that when she heard or saw some of the unknown words she used translating to interpret the message. If there were unknown words in the listening message, she could not interpret the entire message while listening and thus missed hearing the next passage. However in that case, while reading she referred to a dictionary for help. The participants also used reconstruction only for listening. They mentioned that they referred to familiar content words or phrases that they heard in order to reconstruct the overall meaning of a passage. However, they were only able to retrieve

information and produce utterances in L1 but not in L2 (English) entirely. Nonetheless, the highly proficient participant A did not use any of the above strategies. She could retrieve information and produce utterances both in L1 and L2 successfully. She mentioned that she understood the listening material automatically as soon as she heard the message. She said she didn't have to do anything to interpret the meaning. The meaning just "came to her head" as soon as she heard the words. Unlike the other participants, she seemed to interpret the message automatically and retrieve this information with nearly the same result in L2 as in L1. Therefore, it appeared that she did not use many strategies while listening.

All participants used inferencing most often from among the compensation category of strategies for listening although the highly proficient participant A used less inferencing strategies compared to the mid- and low-level participants. These participants used an equal amount of two types of inferencing strategies: using familiar content words and drawing on knowledge of the world. However, there were some differences in the way they used these strategies. Participant A mentioned that she used these strategies to double check her answer to the questions whereas participants B and C mentioned that they used these strategies mainly to construct or reconstruct the meaning of messages or sentences. Unlike the other participants, participant C used three more strategies, using context, using visual clues and taking notes. She mentioned that she tried to match pictures with familiar content words that she heard in the message to find the correct answer for a question. She also mentioned that if there were words that she did not know or for which she could not understand the pronunciation, she used the context of the message based on what she could understand in order to find an answer. She mentioned that when the message was long she wrote down important content words to help her remember the content of the message and to determine her answer.

Translating was also used by participants B and C for reading, and it was used more than any other cognitive strategy. Both of these participants mentioned that when they came across unknown words, they translated the messages in order to understand the entire meaning. If they could not comprehend the entire meaning, even if they translated the messages, they relied on a dictionary to research the meaning of unknown words in an effort to better understand the entire message. They also used skipping and analyzing. Both of these participants mentioned that when they came across an unknown word, firstly they tried to guess the meaning of unknown word by considering the context. If they could not discover the meaning of the words, they either resorted to the dictionary or skipped the sentence. They mentioned that they only skipped the sentence when they felt it was not related to the main idea of the paragraph. Unlike participants B and C,

participant A mentioned that she ignored the complicated sentences and kept reading the passage. By doing this, she said she could eventually comprehend the sentence.

Participants B and C also mentioned that they used analyzing when they came across a complicated sentence. Participant C mentioned that she broke such a sentence into small parts and relied on the meanings of the words in each part to interpret or construct a complete meaning. Participant B mentioned that she initially relied on the meaning of words of a complicated sentence in order to comprehend it. If this strategy did not work due to unknown words, she then referred to a dictionary. If none of these strategies helped her comprehend a complicated sentence, she read it repeatedly while using her grammar knowledge. Skimming was another strategy used by participants B and C. They mentioned that they first skimmed through all of the reading materials in order to grasp the outline of the story or the main ideas during the while-reading stage. They then reread the reading material more closely to answer the comprehension questions during the after-reading stage. However, participant A didn't report using this strategy or other strategies, except skipping. All of the above cognitive strategies were reported only during the while-reading stage.

More common compensation strategies were used by all participants regardless of their proficiency, and they were reported in all reading stages (before-reading, while-reading and after-reading). Repeating was used more than other compensation strategies by the low-level participant C, whereas the highly proficient participant A used world knowledge the most. Participant A mentioned that she reread certain parts only when she could not remember the content in the after-reading stage whereas participants B and C mentioned that she reread not only when this occurred but also in other cases. Participants B and C mentioned that they also used this strategy when they needed to inference the content in order to answer the questions and to check whether answers were actually stated in the reading passage due to their partial comprehension of the passage. Moreover, participant B said she routinely did a second reading in order to closely examine and comprehend so as to answer the comprehension questions more correctly.

Inferencing strategies were reported at all three reading stages. Participant A mentioned that she read the title of the passage and the author during the before-reading stage, as this information could tell her about the content of reading. She also mentioned that she used her background knowledge to tackle the inference-type questions during the after-reading stage. However, participants B and C used this strategy only in the latter case. All of the participants also used using context and controlling the speed mainly in the while-reading stage and guessing blindly in

the after-reading stage.

All of the participants mentioned that they used context to guess the meaning of unknown words successfully and they said that they could comprehend the text better when they read slowly. Participant A mentioned that she just chose any answer when she was tired of inferencing or when no strategy worked whereas participants B and C mentioned that they did this only when they were tired of inferencing. Participants B and C also mentioned that they relied on familiar content words to interpret the entire meaning when they faced complicated sentences during the while-reading stage.

2) Indirect Strategies

According to Oxford (1990), indirect strategies support and manage language learning. There are three groups: metacognitive, affective and social strategies. Among these, only metacognitive strategies were reported in the study. Metacognitive strategies help learners to direct and control mental learning. She suggests eleven tactics as the metacogntive strategies: overviewing and linking with known material, paying attention, delaying speech production, finding out about language learning, organizing, setting goals and objectives, identifying the purpose of a language task, planning for a language task, seeking practice opportunities, self-monitoring, and self-evaluating.

<Table 3> shows the three metacognitive strategies used by participants: selected attention, self-monitoring, and self-evaluating. Metacognitive strategies were used more for listening than for reading by the mid- and low-level participants whereas the opposite pattern was observed in highly proficient participant A. Among these strategies, self-evaluating was reported only for reading.

All participants appeared to show differing patterns in terms of their use of metacognitive strategies as a mode changed. The highly proficient participant A used only evaluating strategies while listening whereas the other participants used selected attention as well as evaluating strategies while listening and reading. However, they differed in the frequency of the use of each strategy and in how a strategy was used. The mid-level participant B used selected attention and self-monitoring both for listening and reading but used them more for listening. Participant C used the selective strategy for listening and reading but used evaluating strategies only for reading.

Participants B and C used the selective strategy heavily while listening. They mentioned that they paid more attention to familiar content words in an effort to interpret the listening materials; in particular, they paid attention to certain words that also appeared in the comprehension questions. They mentioned that they often tried to match the words that appeared in the questions

and answers with what they heard. However, none of these strategies were reported by participant A. As mentioned above, participant A often mentioned that she could understand the oral texts as soon as she heard them without extra help and that she could even retrieve the oral texts in L2 exactly. Therefore, it appeared that she did not need to use the selective attention. Participant B used self-evaluating during listening. She mentioned that the faster the utterances were, the more difficult it was for her to understand the meaning or main ideas of the message.

Participant A mentioned that when she was not certain about her answer, she usually checked her answer by going back to the text and finding clues. She also evaluated the overall difficulty of the questions during the after-reading stage. She mentioned that she felt her weakness in her test-taking skills when she faced double- or triple-twisted inference-type questions, such as those regarding the author's intention. She also mentioned that she constantly judged herself on her comprehension of the reading materials during the while-reading stage. However, the mid- and low-level participants B and C reported their use of evaluating strategies only during the after-reading stage. They mentioned that they evaluated the difficulty of the text when answering the comprehension questions; they also acknowledged their weakness of grammar knowledge while comprehending the text. Lastly, participant C mentioned that she checked her answer by finding content that appeared among the answers in the text.

2. Listening and Reading Strategy Questionnaires

<Table 4> shows some of the variance between the overall frequency of the use of strategies for listening and that for reading. There is only a slight difference. Overall, participants used more strategies for reading than for listening. The difference in the frequency of strategy use for both of these activities becomes greater as the gap between the abilities for both listening and reading increases. For example the highly proficient participant A had a greater difference in her ability to listen and read and there were greater gaps between the use of strategies for listening and reading. However, the least difference in the ability of listening and reading was found for participant B as well as the smallest gap between the use of strategies of listening and reading. These findings in addition to the verbal results indicate that strategic behaviors for each mode are related to the level of ability for each skill more than they are the overall proficiency of the participants.

〈TABLE 4〉 Mean Number of Strategy Use

Strategy	A		B		C	
	L	R	L	R	L	R
Cognitive	3.60	3.23	3.37	3.38	3.30	3.31
Compensation	3.00	3.63	4.14	3.00	4.29	3.18
Metacognitive	3.60	3.75	3.00	4.25	2.80	4.25
Mean	3.40	3.53	3.50	3.54	3.46	3.57

Similar to the results of the interview, the highly proficient participant A used more cognitive strategies while listening and more compensation strategies while reading compared to the other mode respectively. However, unlike the results of the interview, she used slightly more metacognitive strategies for reading than for listening. This occurred as a result of the following: in the interview, she mentioned that she had no difficulty in understanding the listening text or finding the correct answers. Therefore, there was no need for her to use strategies that help learners verify or direct their attention to certain parts in order to confirm their comprehension or answers, as was reported for her reading. In other words, she knows when to use certain strategy; this has been mentioned in other studies (Bacon, 1992a, 1992b; Murphy 1986, 1987). Additionally, the questionnaire contains other types of metacognitive strategies (a general question asking whether setting clear goals improves their listening/reading skill in addition to overall evaluation of the learner's listening/reading achievement) that were not reported in the interview and thus affected the frequency.

Unlike the results of the interview, the mid- and low-level participants showed no significant difference in the frequency of their use of cognitive strategies for listening and reading. They used more compensation and metacognitive strategies for reading than for listening. This result may have been a result of their using a greater variety of compensation and metacognitive strategies while reading than while listening; therefore giving these participants additional chances to mark a high score on the questions about reading than for those concerning listening. As this result is not clearly explained, it needs to investigate more thoroughly.

Overall, the results of the interview and LRSQ indicate the following: first, the participants used all three types of strategies (cognitive, compensation and metacognitive) regardless of their proficiency level and regardless of the mode (listening and reading). However, they differed in the types of strategies used and how often they used these strategies according to their proficiency level and mode. The overall strategy use was higher for reading than for listening. However, the

highly proficient participant used more cognitive strategies while listening and more compensation and metacognitive strategies while reading. The mid- and low-level participants used a greater variety of compensation and metacognitive strategies while reading than while listening, although a higher frequency of the use of compensation strategies was revealed for listening and a higher frequency of the use of metacognitive strategies was revealed for reading. Second, there is a tendency toward using certain types of strategies during each stage of reading. Cognitive strategies were only reported during the while-reading stage and metacognitive strategies during the after-reading stage, whereas compensation strategies were reported for all three stages. Third, different levels of participants used the same strategies differently. The highly proficient participant used inferencing to double check her answer whereas the mid- and low-level participants used inferencing in order to construct or reconstruct the meaning of the messages. Fourth, the highly proficient participant used more top-down strategies both while listening and while reading, though she used more top-down strategies for listening than for reading. Mid- and low-level participants used more bottom-up strategies both for listening and reading, although they used more bottom-up strategies for listening than for reading.

V. Conclusion

This study investigated strategic behaviors with modality. The results of this study reveal that there are similarities as well as differences in the use of strategies as the mode varies, a position held by the dual process view (Brown, 1994; Kwon, 2005; Lund, 1991; Murphy, 1996; Mecartty, 2000; Nunan 1991b; Park, 2004; Thompson, 1995). Three types of strategies (cognitive, compensation and metacognitive) were used both in listening and reading, but they differed in the use of specific strategies within these categories and in the frequency of the use of strategies as the mode varied. The level of participant proficiency also affected these strategic behaviors as the mode changed.

The results show that the overall use of strategies is higher for reading than for listening. However, the highly proficient participant used more top-down strategies than bottom-up strategies regardless of modality whereas the mid- and low-level participants showed the opposite pattern, a finding that is in agreement with earlier studies (Block, 1992; Carrell, 1983, 1988; Carrell & Eisterhold, 1983; Rost, 1990). More precisely, the highly proficient participant A used more

top-down strategies while the mid- and low-level participants used more bottom-up strategies for listening than for reading. This result is partially supported by previous studies that listeners rely more on top-down strategies compared to readers (Hildyard & Olsen, 1978, 1982; Kintsch & Kozminsky 1977; Lund, 1991; Waker, 1976; Park, 2004).

Similar to earlier studies, (Murphy 1996; Rost, 1990; Thompson, 1995), the results also show some difference in the use of modality-specific strategies according to the participants' proficiency level. The highly proficient participant A used more cognitive strategies for listening and more compensation and metacognitive strategies for reading, whereas the results from interview and survey were inconsistent regarding the use of strategies for the mid- and low-level participants. However, all participants used a greater variety of strategies within the compensation and metacognitive strategy category for reading than for listening.

More specifically, skipping within the cognitive category, repeating, controlling the speed, and guessing blindly within the compensation category and self-monitoring within the metacognitive category were used only for reading by all participants. Skimming, scanning and analyzing within the cognitive strategy category were used only for reading by only mid- and low-level participants. Due to differences in the decoding process (Lund, 1991; Sinatra, 1990), it is natural that the former two strategies were used only while reading whereas using analysis (grammar knowledge) only while reading is supported by Mecartty's study (2000). However, no strategies were used only for listening by all participants. Getting the idea quickly within the cognitive category was used only for listening by the high- and mid-level participants. The highly proficient participant used recognizing and retrieving the pattern within the cognitive category and used it heavily and only for listening. Reconstructing in the cognitive category, using visual clues in the compensation category, and selected attention in the metacognitive category were used only for listening by the mid- and low-level participants. Drawing on knowledge of the world in compensation category was used both for listening and reading by all participants. Translating in the compensation category, using familiar content words in the compensation category and selected attention in metacognitive category were used both for listening and reading by the mid- and low-level participants. There was a pattern toward using certain types of strategies during certain reading stage: cognitive strategies were only reported in the while-reading stage and metacognitive strategies during the after-reading stage whereas compensation strategies were reported for all three stages.

Occasionally, the reasons of using the same strategy differ according to a participant's level. For example, the highly proficient participant used inferencing strategies to double check her

answer while the mid- and low-level participants used these strategies to construct or reconstruct the meaning of messages. The highly proficient participant reread the text only when she could not recall the content whereas the other participants reread the text to inference the content and clarify their answers. Participants usually used strategies for the purpose of comprehending and answering the questions correctly. Therefore, the participants, especially the highly proficient participant, used more than one strategy simultaneously. For example, the high-level participant evaluated her comprehension by recognizing and retrieving patterns and by using her background knowledge. The mid- and low-level participants paid attention to unknown words to inference their meaning using their background knowledge and context.

The above results support the view of a dual process and thus suggest the requirement of a different technique overall for teaching listening and reading in the classroom. To be more specific, the results suggest the following: first, drawing on their knowledge of the world is a common strategy for participants that can be used or taught regardless of the modality or the proficiency level of the learner. Indirectly this suggests that activating students' prior knowledge is a primary skill in learning and that some sub-skills of listening and reading are connected. This result implies that integrated instruction of listening and reading or content-based instruction where more than two skills are usually incorporated in the classroom tasks can be effectively used to facilitate students' background knowledge in the classroom. Second, translating, using familiar content words and selected attention are common strategies that are used mostly by lower-level learners regardless of the modality. In other words, lower-level learners heavily rely on bottom-up strategies while comprehending listening and reading. This suggests that it is necessary to introduce and model more top-down strategies and give students ample opportunity to practice using them in the class. Third, there were differences in the use of different types of strategies and in the frequency of the use of strategies as the mode varies. Therefore, various types of strategies should be introduced to students and separate explicit instructions for each skill should be implemented in the class so as to develop each listening and reading skill.

Further investigation is needed to validate the results of this study. This study investigated a small number of participants; thus, a follow-up study with a large number of students using a quantitative design is needed to validate and generalize the results of this study. Other factors, such as gender and difficulty of the text were not considered. In addition, the listening and reading comprehension situations were refined to test-oriented situations and the materials used for listening and reading were different in this study.

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〈Appendix〉 Listening/Reading Questionnaire

1. I create a mental image about the text.

2. I try to understand entire meaning without translating the text into L1.

3. I try to guess what I will hear/read next based on what I have heard/read.

4. When the text is difficult, I try to understand the meaning based on the meaning of each word rather than the meaning of sentences.

5. I try to understand the text by associating the meaning of each word in L1 rather than by associating the meaning of each sentence in L1.

6. I try to rely on linguistic knowledge to interpret the text.

7. I try to understand the text using my background knowledge.

8. I don't linger on what I can't understand but skip and move to the next thing quickly.

9. I try to translate words and sentences in L1 to interpret the text.

10. I briefly skim the text to know what the text is about.

11. I tried to summarize.

12. I try to look for main ideas and supporting ideas.

13. I try to look at the title, author and topics to guess what the text is about.

14. I look up the dictionary to find the meaning of unknown words.

15. I try to guess the overall meaning instead of interpreting every word or expression.

16. I take notes which I think are important.

17. I try to find some clues from the context, especially when I can't guess the meaning of words or sentences.

18. I look at the comprehension questions first to get some ideas on what to listen for.

19. Before listening/reading, I look at pictures/charts/figures/tables to guess the content of the text.

20. Before listening/reading, I skim the content words in the comprehension section to guess what I am going to hear/read.

21. I listen/read again if I don't understand the text.

22. I try to infer author's intention and ideas.

23. When I don't understand the text, I slow down the process.

24. I guess what will come next in the text.

25. I constantly check whether I understand what I heard/read or not.

26. I judge whether the text is easy or difficult.

27. I realize it is difficult for me to understand fast spoken English (L)./ I verify my answer by scanning the text again (R).

28. I skip what I can't understand or hear but pay attention to the next thing quickly.

29. I have a clear goal for improving my listening/reading skills.

30. I check my progress/achievement in listening/reading.

초 록

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본 연구는 중학교 학생들이 읽기와 듣기과정에서 어떠한 책략들을 사용하는지 세 명의 학습자를 중심으로 실시된 사례연구이다. 본 연구의 구체적인 목적은 다음과 같다. ⑴ 읽기와 듣기과정에 사용되는 유사한 책략은 무엇이며 다른 책략은 무엇인가? 이 두 과정에서 많이 사용되는 책략은 어떤 것이 있는가? 이 두 과정에서 사용되는 책략의 빈도수에 차이가 있는가를 포함하는 책략 사용의 비교 분석, ⑵ 학습자의 영어능력 수준에 따른 책략 사용상의 차이가 있는가? 책략 사용 빈도수가 학습자의 영어능력 수준에 따라 그리고 과정에 따라, 차이가 있는 가를 포함하는 책략 사용과 학습자 능력 및 과정의 관계 분석이다. 본 연구에서는 집단 면담과 설문지를 사용하여 자료를 수집하였다. 분석 결과는 다음과 같다. 첫째, 과정에 따라 동일한 책략이 사용되기도 하고 각기 다른 책략이 사용되기도 하였다. 둘째, 학습자의 영어능력 수준이 책략 사용에 영향을 주었다. 전반적으로 책략을 듣기과정보다 읽기과정에서 더 많이 사용하였다. 영어능력 수준이 높은 학습자의 경우 과정에 관계없이 하향식 책략(top-down strategies)을 더 많이 사용하였으며, 중・하위 수준의 학습자는 상향식 책략(bottom-up strategies)을 더 많이 사용하였다. 셋째, 학습자의 영어능력에 따라 특정 책략이 특정 과정에 더 많이 사용되었다. 상위 수준의 학습자는 듣기과정에서 인지 책략을 더 많이 사용하였으며, 읽기과정에서는 보상 책략과 초인지 책략을 더 많이 사용하였다. 또한 읽기 과정에서 더 다양한 유형의 책략들이 사용되었다.

주제어 : 인지 책략, 보상 책략, 초인지 책략, 상향식 책략, 하향식 책략, 영어능력 수준, 듣기과정, 읽기과정