Writing Listening Logs and Its Effect on Improving L2 Students’ Metacognitive Awareness and Listening Proficiency

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Abstract: This study investigated whether writing weekly listening logs could influence college English learners’ metacognitive awareness and listening proficiency. In addition, the Metacognitive Awareness Listening Questionnaire (MALQ) was applied to examine the learners’ knowledge of their listening process. It is process-oriented research conducted by analyzing the MALQ and students’ listening logs as to how their metacognitive awareness and listening proficiency have changed during the semester. Eighty-nine students who took an English listening practice course at a university participated in this study. The research findings are as follows. First, it turned out that there was a significant relationship between EFL university students’ listening comprehension and some subscales of metacognitive awareness. Second, the students had an opportunity to reflect on learning through regular listening activities, and weekly listening logs, which included important information about listening process and practice. Third, as the students’ listening proficiency increased at the end of the semester, it was found that introducing listening logs along with classroom lessons helped the students improve their listening ability. Finally, the high proficiency group students used multiple strategies simultaneously, regardless of the type of listening strategies, while the low proficiency group students used one or two limited listening strategies. However, the low proficiency group students may have had trouble expressing their ideas in English or recognizing the listening strategies they used, not because they did not use a lot of listening strategies. Therefore, teachers should regularly check if students are following their instructions and help them use appropriate strategies for better understanding.

Keywords: Metacognitive awareness; listening strategies; listening proficiency; learning journal; listening log; metacognition

1. Introduction

Teaching students how to improve their listening skills is one of the most difficult tasks for English teachers. Walker [1] mentioned that listening skills usually require a long period of time to achieve, involving the student experiencing emotional ups and downs. Hence, proper listening guidelines with appropriate resources and strategies based on students’ interest and abilities are critical to providing a learning environment to improve students’ listening proficiency. Vandergrift and Goh [2] argued that metacognitive approach can be incorporated into listening learning.

Metacognition has been widely recognized in second language learning for the last few decades. It is higher order thinking and includes active control over cognitive processes in learning [3]. Some researchers associated metacognition with intelligence [4]. Also, many research findings have shown the important role of metacognition as a predictor of successful language learning [5, 6].

Vandergrift, Goh, Mareschal and Tafaghodtari observed that about 13% of variance in listening achievement can be explained by metacognition in their validation of the Metacognitive Awareness Listening Questionnaire (MALQ) [7]. Learners with a high level of metacognitive awareness can better understand listening materials and perform better. According to Vandergrift [8], skilled listeners are more aware of their
listening process than less skilled listeners. Therefore, finding out learners’ listening processes will help teachers to teach those who are struggling with listening activities. Improving the learner's metacognitive awareness of listening has long been advocated, but a systematic investigation of metacognitive knowledge of language learners is a relatively recent research topic.

Although there are several studies that provide empirical support for the importance and role of metacognition in L2 listening [9-11], the contribution to learner listening has not yet been widely discussed. According to Gilliland [12], in the process of writing listening logs, learners can develop metacognitive knowledge of their listening process. She also argued that the listening log is an ongoing task that documents students’ participation in extracurricular activities and reflects on their listening process. Therefore, listening logs can provide insight into the listening process and metacognitive awareness in learners’ learning process.

However, very few studies have been done on the usefulness and effectiveness of listening logs in EFL situations, as the application of listening logs to a class requires considerable time and effort by teachers and students. Taking into account the lack of research on the use of listening logs in class, this study investigated whether writing weekly listening logs during a semester could affect metacognitive awareness and listening proficiency of college English learners. As the source of most listening materials, YouTube was chosen as it has become the most successful Internet website providing a new generation of short video sharing service since its establishment in early 2005 [13], and it provides authentic listening sources that created by people from around the world. Alimeemaj [14] mentioned that "The real advantage of YouTube is that it offers authentic examples of everyday English used by everyday people". Additionally, Metacognitive Awareness Listening Questionnaire (MALQ) was applied to learn what happens in the listening process of learners. With the result from MALQ, this study investigated how their metacognitive awareness of L2 changes depending on the level of language proficiency through an analysis of their listening logs. The difference that has characterized low and high proficiency students has been reported in previous research on their use of metacognitive strategies [36].

2. Literature Review

The listening log introduced by Kemp [15] can motivate learners to participate in and reflect on their learning process. By regularly writing learning diaries, they develop independent learning skills such as planning, monitoring, and decision-making skills for listening. The ability to make decisions for their learning will create a self-regulated learning environment that ultimately develop learner agency.

2.1 Learner agency

Bandura [16] proposed that agency is the ability to do something intentionally or the power to initiate intentional action. It is the ability to make choices in a life-changing way and act on those choices [17]. Teachers can guide the development of learning agencies by letting students first learn what self-regulatory learners generally do [18]. In addition, Murray [19] emphasized the importance of self-regulation and student contributions to learning in the classroom. In a self-regulated learning environment, students will be able to reflect on their own learning process and find out listening strategies that work best for them. Therefore, learner agency in a self-regulated learning environment will be a basic and essential condition for writing listening logs successfully.

2.2 Learning log

Language learning logs, diaries, or journals, a form of learner stories, are defined as self-reports in which learners write various aspects of the learning process [20]. Moon [21] elaborated on the conditions needed when conscious and intentional reflection is encouraged. For example, learners need a clear explanation of the guidelines and purpose of the writing process and a sense that reflecting on learning is a valuable and essential learning process. Guided listening exercises promote the automation of a cycle of metacognitive processes [22], and fostering the acquisition of processing routines [23]. Nowadays, Youtube is one of the best listening sources since it has a wide variety of different topics for learners to choose from and is easy to watch whenever and wherever they want. During or after watching Youtube, they can record their listening practice and reflect their listening process.
2.3 Metacognitive awareness

Flavell [24] proposed that it is necessary to understand the meaning of metacognition in order to understand the structure of metacognitive recognition. It refers to “one’s knowledge concerning one’s own cognitive processes and products or anything related to them”…and “active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective” (p.232).

Over the past two decades, many studies have been conducted on metacognitive awareness in learning. There is extensive evidence that learners’ metacognition can directly affect the learning process and outcomes. [5, 11]. Overall, however, to the researchers’ best knowledge, there is a lack of continuous research on the effectiveness of learning diaries to develop metacognitive awareness of Korean university students and their English listening proficiency.

Furthermore, most studies are concerned with what is seen, such as learning outcomes or the use of strategies, rather than the learner's invisible learning process. Evaluating students with only what is visible can overlook some important elements for their learning. In the light of underexplored and limited research, this research will try to visualize students’ invisible learning process through listening logs.

Research questions:

1. Does metacognitive awareness of L2 listening differ according to the level of listening proficiency?
2. How did the students’ metacognitive awareness of L2 listening change depending on the level of listening proficiency while taking the listening practice class during the semester?
3. What did the students’ listening logs and the proficiency test demonstrate in terms of how learners engage in the listening process and how they use listening strategies differently by level of listening proficiency?

3. Methods

From writing listening logs regularly during watching Youtube with classroom instruction for a semester, it is expected that students will be able to look back on their listening process, discover better listening strategies for their own sake, and develop their metacognitive awareness, ultimately leading to better listening performance (Figure 1).

![Figure 1. Listening development during semester](image)

3.1 Target context
The English listening practice course, offered by the Department of English Education, is a two-credit elective course and anyone interested in improving listening to English, including exchange students, can take it. Its main goal was to improve students’ English listening abilities as part of the training to become future English teachers. One of the authors was in charge of this class, which ran once a week for two hours during the semester. The instructor set different topics for every class and each class consisted of a variety of listening activities related to the topic. Along with the textbooks, various listening activities and materials and handouts related to the weekly topics chosen by the instructor were provided. Varied listening activities and tasks were done including group or pair discussions and individual presentations, vocabulary activities, dictations, listening strategy-building activities, etc.

3.2 Participants

Eighty-nine EFL students (31 males and 58 females) participated in this study. Most participants of this study were freshmen students who took the listening practice course offered by the Department of English Education at University. Most students majored in English education and few were from other departments. There were also five exchange students: two from China, two from Russia, and one from India. As expected, the purpose of taking the class was to improve their English listening ability and become a competent English teacher in the future. All Korean participants started learning English from the third grade of elementary school and went on to college. In class, there was not much problem communicating in English since in general, their English was good enough to major English or take English-related classes.

3.3 Instruments

3.3.1 English listening proficiency test

To determine the effect of writing listening log to improve listening ability, pre and post-tests were conducted at the beginning and end of the semester. In addition, the top 20% and bottom 20% students were selected based on the result of the pre-test to determine the difference between high and low proficiency groups on metacognitive awareness of L2 listening.

Two parallel listening proficiency tests were employed, taken from Heinle and Heinle TOEFL Test Assistance Listening [25]. The TOEFL test is an international English proficiency assessment widely known and used in academic fields conducted by ETS (Educational Testing Service). The TOEFL test consists of academic content that represents various situations at university, and listening logs also include academic content such as lectures, TED talks and interviews. Therefore, students are expected to improve their TOEFL scores by the end of the semester if they regularly listen to English and write a listening log. The test includes four optional items, consisting of three parts: short conversations (30 items), extended conversations (8 items), and lectures (12 items), for a total of 50 questions (Appendix A). Every question was played once and, the students chose the one best answer. Each correct answer scored one and the maximum raw score was 50. The test–retest reliability was fairly high with a coefficient of .89, as calculated.

3.3.2 Metacognitive Awareness Listening Questionnaire (MALQ)

Table 1 shows how the questionnaire items correspond to the five factors that contain 21 items. The five factors are directed attention (four items), mental translation (three items), person knowledge (three items), planning and evaluation (five items) and problem solving (six items). As shown in Appendix B, responses to the MALQ are chosen from a six-point Likert scale indicating agreement levels (1= strongly disagree, 2= disagree, 3= partially disagree, 4= partially agree, 5=agree, 6= strongly agree). Previously, the reliability coefficient of .85 [26] has been reported and in this study, it was estimated to be .82.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Questionnaire items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed attention</td>
<td>2, 6, 12, 16</td>
</tr>
<tr>
<td>Mental translation</td>
<td>4, 11, 18</td>
</tr>
<tr>
<td>Planning and evaluation</td>
<td>1, 10, 14, 20, 21</td>
</tr>
</tbody>
</table>
3.3.3 Listening log

In writing a learning journal, Harris [27] valued the need for precise guidelines and explanations to avoid students’ confusion and misunderstanding.

For this study, with detailed instructions on how to find listening materials and what to write for each section, students were assigned to write a weekly listening log that include their listening materials and learning experience. There are four elements that students should include in the listening log: summary, response to the content, reflection on your listening ability, and listening strategies that you used during listening, mainly adopted from Gilliland [12] and revised. The instructor provided 10 different topics, for example, education, culture and economy (Table 2). The students could choose any listening materials mainly from Youtube they could find related to each topic.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Listening sources from students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Education</td>
<td>Youtube, TED Talks</td>
</tr>
<tr>
<td>2</td>
<td>Culture</td>
<td>Youtube TED Talks, VOA News</td>
</tr>
<tr>
<td>3</td>
<td>Technology</td>
<td>Youtube, TED talks</td>
</tr>
<tr>
<td>4</td>
<td>British show</td>
<td>Youtube</td>
</tr>
<tr>
<td>5</td>
<td>Animation</td>
<td>Youtube</td>
</tr>
<tr>
<td>6</td>
<td>Economy</td>
<td>Youtube, ABC news</td>
</tr>
<tr>
<td>7</td>
<td>Health</td>
<td>Youtube, TED Talk</td>
</tr>
<tr>
<td>8</td>
<td>American show</td>
<td>Youtube</td>
</tr>
<tr>
<td>9</td>
<td>Music</td>
<td>Youtube</td>
</tr>
<tr>
<td>10</td>
<td>Travel</td>
<td>Youtube</td>
</tr>
</tbody>
</table>

3.4 Procedures

On the first day of the semester, the TOEFL test was administered as a pre-test for half an hour. Then, the students watched a TED talk for about 10 minutes and immediately after the lecture, they responded to the MALQ. For the internal consistency analyses, Cronbach’s alphas were calculated for the MALQ scale and its five factors. Two items (No. 11 and 16) were deleted which caused low reliability.

The results were 0.68 for directed attention when number 16 was deleted; 0.75 for mental translation when number 11 was deleted; 0.79 for person knowledge; 0.78 for planning & evaluation; 0.77 for problem solving; and 0.87 for the overall MALQ scale. According to these reliability coefficients, the MALQ scale and its factors were found to have acceptable reliability for the learners participating in this study.

Every week, students had to email their journals to the instructor in advance and on the day of class, they had to hand in a copy of the journal. Most students completed 10 entries including 10 different topics, and eventually a total of 880 pieces of writing were collected. On the day the last journal was turned in, another set of the TOEFL test as a post-test was conducted for 30 minutes.

3.5 Data analyses

First of all, the analysis of the MALQ was done with 19 of the 21 items after two items were deleted and as their scores for the items, the Likert-scale points selected by the students were coded. The two items (No. 3 and No. 8 for person knowledge) were reverse coded [7]. Also, since the mental translation strategies were negatively related to the other subscales [7], the mental translation subscales were reversed before the averaging was done. After the MALQ data were coded, scores for the five subscales and the overall MALQ scale were computed.

Next, a correlation analysis was conducted to examine the correlation between the learners’ metacognitive awareness of L2 listening and their L2 listening proficiency. A simple regression analysis was performed to further determine how the overall MALQ score associated with the L2 listening ability.
Also, an independent t-test was conducted between the high proficiency group (top 20%) and low proficiency group (bottom 20%) in listening proficiency to explore whether there were significant group differences in terms of the five subscales and the overall MALQ scale. All the statistical analyses were conducted with SPSS (version 23).

In addition, the two parallel TOEFL tests used for pre-and post-tests were coded and analyzed. As a result, a probability value of \( p < .05 \) was considered to represent statistical significance. A paired t-test of the two TOEFL tests was conducted to see if the students’ listening skills significantly improved after writing weekly listening logs for a semester.

Last, the three sections of students’ listening logs, response to the content, reflection on your English ability, and listening strategies were coded and analyzed. The summary was not included since there was too much diversity individually. Then, each section was classified into subcategories. For example, the listening strategies were divided into meta, cognitive and socio-affective strategies.

Finally, the frequency of occurrence of each subcategory presented for three categories of listening log and MALQ elements was calculated. The researchers worked independently and the inter-rater reliability for coding listening logs was quite high at \( \kappa = .91 \). There have been some changes to specific data through discussions on the revision and discovery of data analysis. Those categories and subcategories displayed in the student's log were grouped together to define the learner's listening log element.

4. Results

4.1 Metacognitive awareness and proficiency in L2 listening

First, as Table 3 shows, descriptive statistics were developed to represent ranges, means, and standard deviations for each of the five subscales and the overall MALQ score and TOEFL Listening scores. It suggests that means for each of the five factors are in the middle range, with problem solving the highest values at 4.38 and with mental translation the lowest value at 3.31. Standard deviations of the TOEFL scores, mental translation and person knowledge indicated 6.89, 1.06 and 1.06 respectively. The mean of overall MALQ scores is 3.85 out of a possible maximum of 6, which is only a roughly ‘partially agree’ response.

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOEFL score</td>
<td>12.00</td>
<td>48.00</td>
<td>33.49</td>
<td>6.89</td>
</tr>
<tr>
<td>Directed Attention</td>
<td>2.33</td>
<td>6.00</td>
<td>4.18</td>
<td>.70</td>
</tr>
<tr>
<td>Mental Translation</td>
<td>1.00</td>
<td>6.00</td>
<td>3.31</td>
<td>1.06</td>
</tr>
<tr>
<td>Planning Evaluation</td>
<td>2.20</td>
<td>6.00</td>
<td>4.02</td>
<td>.771</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>2.83</td>
<td>6.00</td>
<td>4.38</td>
<td>.584</td>
</tr>
<tr>
<td>Person Knowledge</td>
<td>1.00</td>
<td>6.00</td>
<td>3.34</td>
<td>1.06</td>
</tr>
<tr>
<td>Overall MALQ</td>
<td>2.51</td>
<td>5.55</td>
<td>3.85</td>
<td>.48</td>
</tr>
</tbody>
</table>

To answer the first research question, overall MALQ scores related to L2 listening proficiency and the five subscales were explored using Spearman correlations. Note in Table 4 that except one subscale, planning & evaluation, all subscales of the MALQ are significantly correlated with L2 listening proficiency (\( p < .05 \)). In addition, overall MALQ scores are significantly related to L2 listening proficiency (\( p < .01 \)). However, the subscales of the MALQ L2 has a relatively weak relationship with L2 listening proficiency.

The subscales may not play an important role in listening performance, but they may have some effect indirectly or in combination with other factors.

<table>
<thead>
<tr>
<th></th>
<th>TOEFL scores</th>
<th>Directed Attention</th>
<th>Mental Translation</th>
<th>Planning &amp; Evaluation</th>
<th>Problem Solving</th>
<th>Person Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed Attention</td>
<td>.22*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Translation</td>
<td>.21*</td>
<td>- .76**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Contrary to expectations, although L2 listening proficiency and the subscales of the MALQ do not show strong relationship, the overall MALQ scores are significantly related to L2 listening proficiency. Despite higher correlation between the overall MALQ scores and L2 listening proficiency, it was only moderate (\(r = .36, p < .01\)). There may be other factors that could be related to listening comprehension, including vocabulary, prior knowledge, speech rate, type of input, and speakers’ various accents [28].

Next, a simple linear regression analysis was conducted to examine the relationship between metacognitive awareness and L2 listening proficiency in more detail, proving to be statistically significant, \(F(1,87) = 13.14, p < .01\). It has been found that the learners’ overall MALQ scores were significantly related to TOEFL listening scores. As expected, the higher the score in the MALQ scale, the higher the score in the TOEFL listening test. As measured by the overall MALQ scale, Metacognitive awareness of L2 listening accounted for 13% of the variance in L2 listening proficiency by the TOEFL test (\(r = 0.36, R^2 = 0.13\)). The effect size calculated in the analysis well exceeded the suggested value (i.e. \(r = 0.30\)) for a medium effect, compared with the criteria by Cohen [29]. The amount of variance in listening performance that the MALQ score occupies was exactly the same as the previous reports of 13 % [7].

Moreover, an independent t-test was performed on the subscales and overall MALQ scores to determine whether there was any difference between the high (top 20%) and low proficiency groups (bottom 20%). The results presented in Table 5 show significant group differences in terms of mental translation (\(t = -2.13, p = .03\)), planning & evaluation (\(t = -2.15, p = .03\)) and overall MALQ (\(t = -3.53, p = .001\)). The mean scores of the high proficiency group are higher than the low proficiency group in all subscales, but some are not statistically significant. However, generally, it means that the more-proficient listeners are more reflective and interested in their listening process than less-proficient listeners, which is consistent with research by Vandergrift [8].

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean (SD) High(n=18)</th>
<th>Mean (SD) Low(n=18)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed Attention</td>
<td>4.02 (.64)</td>
<td>4.00 (.84)</td>
<td>-0.9</td>
<td>.73</td>
</tr>
<tr>
<td>Mental Translation</td>
<td>3.53 (1.17)</td>
<td>2.79 (1.83)</td>
<td>-2.13</td>
<td>.03*</td>
</tr>
<tr>
<td>Planning Evaluation</td>
<td>4.10 (.55)</td>
<td>3.59 (.87)</td>
<td>-2.15</td>
<td>.03*</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>4.43 (.43)</td>
<td>4.12 (.77)</td>
<td>-1.56</td>
<td>.12</td>
</tr>
<tr>
<td>Person Knowledge</td>
<td>3.60 (1.27)</td>
<td>2.90 (1.08)</td>
<td>-1.75</td>
<td>.08</td>
</tr>
<tr>
<td>MALQ</td>
<td>3.98 (.39)</td>
<td>3.47 (.47)</td>
<td>-3.53</td>
<td>.001*</td>
</tr>
</tbody>
</table>

Note. *p < .05

4.2 The change of metacognitive awareness in L2 listening

In order to find the group difference in the change of the two significantly different factors, mental translation and planning & evaluation, the students’ listening logs were analyzed for relevant question items from MALQ. Mental translation included words such as ‘translate’, ‘Korean’ or ‘subtitles’. As planning & evaluation, related words like ‘goal’, ‘plan’, ‘test’, and ‘evaluate’ were selected.

Table 6 shows the change in the total number of the two subscales used by each group in the first, 5th and 10th listening logs. In both groups, the total number of words related to mental translation gradually decreased, while Koreans or subtitles continued to be mentioned. Contrary to expectation, the high proficiency group frequently used Korean subtitles to understand content of listening materials. Although it is not recommended to translate in your native language to listen better in L2, students may feel safe with subtitles which can help them understand the content better and motivate them to practice listening regularly.
Table 6. The change of metacognitive awareness in L2 listening by groups

<table>
<thead>
<tr>
<th></th>
<th>1st week</th>
<th></th>
<th>5th week</th>
<th></th>
<th>10th week</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>1. Mental translation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Translate</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Korean subtitles</td>
<td>7</td>
<td>12</td>
<td>7</td>
<td>11</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>17</td>
<td>10</td>
<td>15</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>2. Planning and evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>plan</td>
<td>5</td>
<td>3</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Evaluate</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>My English skill</td>
<td>7</td>
<td>12</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Goal</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>21</td>
<td>24</td>
<td>21</td>
<td>28</td>
<td>32</td>
</tr>
</tbody>
</table>

Note: H: High Proficiency Group, L: Low Proficiency Group

In terms of planning & evaluation, both groups generally showed gradual growth rate. The high proficiency group students consistently wrote that listening was difficult even though they felt their listening skill was improving. However, low proficiency group showed more changes as the semester passed. About ‘My English skill’, the low proficiency group mentioned a lot at the first week, showed some decrease in the 5th week and increased again in the 10th week. At the beginning, the low proficiency group students often evaluated their listening ability bad, mentioning that “my English skill is poor”, or “I am not good at listening English.” In the 10th week, many low proficiency group students said, “My listening ability was improving because of my regular listening practice.” It is found that the low proficiency group students became more confident and felt their listening ability was developing in the course of the semester.

4.3 Students’ listening logs

4.3.1 Summary of the content

In summary, the students were asked to summarize the content of the listening materials they watched. However, the length and content quality of each summary was very different. Some students wrote every detail about what they watched, such as the main actor’s appearance, personality and specific conflict situations. Other students, on the other hand, briefly explained the entire story in just a few lines. The length of the summary is not always related to the quality of the writing, but in general the longer text is a more detailed and thorough summary of the entire story. In addition, while writing the summary of the listening content they watched, the students referred to English or Korean subtitles and got some information on the content through search engines such as Google. Through this series of courses, they learned some new English words and expressions, which are expected to develop their bottom-up listening skills.

As the students were exposed to different topics every week, they were supposed to build their background knowledge which could affect their top-down processing and contribute to L2 listening comprehension significantly [30, 31].

4.3.2 Response to the content

Second, the students wrote their feelings and opinions about the content. They connected their experiences related to the content and shared what they learned or felt. Most of them reported that listening was fun and enjoyable because they chose materials that are either their favorite or easy ones. Thus, students’ logs often mentioned “It was a little bit easy since I saw it before,” “I could understand well because I already watched it before,” “It is my favorite movie ever.” Words that are often used in emotion coding are: amazing, beautiful, entertained, enjoyed, favorite, fun, impressed, interested, interesting, like, loved, pleased. Specifically, 85% of students wrote enjoyed and liked followed by loved and favorite, 82% and 73%, respectively.
4.3.3 Reflection on your English ability

In this section, the students were asked to evaluate their English ability in listening exercises and find out some distractors that made them difficult to understand. Even though the students chose listening materials on their own but still had some challenges. Table 7 is the most frequently reported in the “reflections on your listening ability” section. A lot of students commented on fast speed (92%), similar to a study by Kim and Cha [32] showing that the speed of listening text is a source of impediments for students’ understanding. Also, the most frequently identified elements that prevents listeners from understanding were prolonged sounds or linking sounds (38%), vocabulary (51%), pronunciation (68%) and different accents (82%).

Table 7. Reflection on your listening ability; What makes listening challenging?

<table>
<thead>
<tr>
<th>Category</th>
<th>Example of reflection on your English ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. fast speed</td>
<td>The speed of the video was too fast to understand the main idea</td>
</tr>
<tr>
<td>2. accent or intonation</td>
<td>I love English dramas, but I am not familiar with the accents, so it is hard…</td>
</tr>
<tr>
<td>3. pronunciation</td>
<td>I often watch TED because there are various lectures I can watch. Sometimes it is difficult to understand their pronunciation.</td>
</tr>
<tr>
<td>4. vocabulary</td>
<td>When listening, if there are some new words, I am easily frustrated.</td>
</tr>
<tr>
<td>5. prolonged sound</td>
<td>Prolonged sounds make listening very hard.</td>
</tr>
</tbody>
</table>

Table 8 shows the change in the number of reflections on the students’ listening ability by the high 20% and the low 20%. Regardless of their listening ability, ‘fast speed’ was most often cited as a difficult factor to understand the whole story. Even high level students mentioned they had trouble understanding because sometimes the talker spoke too fast. Some advanced students wrote that they practiced listening almost every day for a better understanding.

Table 8. The change of reflection on your listening ability by groups

<table>
<thead>
<tr>
<th></th>
<th>1st week</th>
<th></th>
<th></th>
<th>5th week</th>
<th></th>
<th></th>
<th>10th week</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H</td>
<td>L</td>
<td>T</td>
<td>H</td>
<td>L</td>
<td>T</td>
<td>H</td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>1. fast speed</td>
<td>8</td>
<td>8</td>
<td>16</td>
<td>6</td>
<td>7</td>
<td>13</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>2. accent</td>
<td>7</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>3. pronunciation</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>4. vocabulary</td>
<td>3</td>
<td>8</td>
<td>11</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. prolonged sound</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. slang or joke</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7. voice tone</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. long sentence</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>14</td>
<td>34</td>
<td>23</td>
<td>22</td>
<td>45</td>
<td>19</td>
<td>27</td>
<td>46</td>
</tr>
</tbody>
</table>

Note. H = High Proficiency Group; L = Low Proficiency Group; T = Total

Over time, the total number of reflections on the low proficiency group’s listening ability has increased, from the 1st log (14) and the 5th log (22) to the 10th log (27), while the high proficiency group consistently showed some reflection on their listening ability and showed little change (20, 23, 19, respectively). Different accent and pronunciation, along with fast speed were also major obstacle to listening. When the students chose TED Talks, which included some talks having foreign accents that were not familiar to them, they found it more difficult to understand than listening to material with American accents.

The change in the number of reflections on their listening ability by the high proficiency group can be seen in Figure 2. An interesting finding is that the number of factors that interfere with listening gradually decreased. This indicates that students with high levels of proficiency improved their listening, so they no longer noticed these distractors, or they chose easier materials to avoid such problems. When comparing the difficulty of the first and last listening material in the listening log, no significant level differences were found, especially in terms of vocabulary and sentence structure. Rather, the students tended to use the same source frequently and select similar levels of materials, probably because it was easily and conveniently accessible. Therefore, they
have become accustomed to similar materials or they actually improved their listening skills during regular listening practice.

**Figure 2.** The change in the number of reflections on listening ability by high group.

Figure 3 shows the change by the low proficiency group in the number of reflections on their listening ability. It indicates that the low level students consistently described accent, fast speed, pronunciation and vocabulary as distractors for listening during the semester. The listening practice must have been challenging and burdensome as most of the important and basic elements of listening turned out to be disturbing factors. Low level students usually feel that they lack a lot of English, so they don't know exactly what part of their skills they lack or they think most areas are lacking. However, no one mentioned anything related to prolonged sounds. Probably not because there were no problems with them, they were not familiar with the term.

**Figure 3.** The change in the number of reflections on listening ability by low proficiency group

4.3.4 Listening strategies

Finally, the students should review and reflect on the strategies used to foster their metacognitive awareness in the listening process. The instructor provided feedback on the use of the strategy, encouraging them to try different strategies and to see which strategies are more effective on certain listening tasks. Most of the students wrote that they listened to difficult parts over and over again when they could not understand them.
during the first listening (95%). Note-taking was one of the listening strategies frequently used (80%), probably because their textbook included a chapter on how to take notes for academic listening and they practiced a few times based on the guidelines. This was followed by background knowledge (70%). Some students said they get help from English or Korean subtitles or scripts (15%) because sometimes it was hard to catch some details of the story. Few students mentioned using top-down and bottom-up strategies (10%).

Table 9 illustrates the listening strategies used during students’ listening practice. Classifications of listening strategies following Go [33] provide a structure for classifying listening strategies written in the students’ logs. Expectedly, the high proficiency group students (top 20%) and the low proficiency group students (bottom 20%) showed different patterns regarding the use of metacognitive and cognitive strategies for the semester. Research has shown that skilled and less-skilled listeners go through different processes on listening input [34]. The difference was also found in this study from the analysis of the students’ listening logs. Overall, the high group students (top 20%) used more metacognitive and cognitive strategies than the low group students (bottom 20%).

<table>
<thead>
<tr>
<th>Category</th>
<th>Strategy</th>
<th>Example of each listening strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metacognitive</td>
<td>1. Self-assessment</td>
<td>I am happy that my listening ability is improving.</td>
</tr>
<tr>
<td></td>
<td>2. Goal-setting</td>
<td>I want to watch American dramas without subtitles.</td>
</tr>
<tr>
<td></td>
<td>3. Directed attention</td>
<td>I need to focus on content words since I can’t catch every word.</td>
</tr>
<tr>
<td></td>
<td>4. Selective attention</td>
<td>I repeat several times to understand some parts.</td>
</tr>
<tr>
<td></td>
<td>5. Monitoring</td>
<td>I monitor my comprehension with top-down or bottom-up strategies.</td>
</tr>
<tr>
<td>Cognitive</td>
<td>1. Inferencing</td>
<td>I guess speakers intention from gestures or facial expressions...</td>
</tr>
<tr>
<td></td>
<td>2. Predicting</td>
<td>Before listening, I like to predict the story from the title.</td>
</tr>
<tr>
<td></td>
<td>3. Note-taking</td>
<td>I always take a note while listening, which helps me to summarize.</td>
</tr>
<tr>
<td></td>
<td>4. Contextualization</td>
<td>I use my background knowledge to understand better.</td>
</tr>
<tr>
<td>Socio-affective</td>
<td>1. Confidence-building</td>
<td>I am very confident after completing my listening log.</td>
</tr>
<tr>
<td></td>
<td>2. Cooperation</td>
<td>In class, we do some group activities, and I think it helps.</td>
</tr>
</tbody>
</table>

4.4 The change of English listening proficiency

By tracking changes in scores at the beginning and end of the semester, the impact of weekly listening logs on students’ listening proficiency was examined. There were a total of 42 students who finished both pre- and post-tests to assess their listening proficiency.

Table 10 shows the change between pre- and post-tests in mean score. After completing 10 weekly listening logs, it was observed that the students’ scores increased from 32.88 to 35.14. A paired t-test was conducted to ensure that the participants’ listening skills improved significantly over a semester. The level of significance was set at 0.05. According to the results, \( t(41) = -2.22, p = .032, d = .34 \), with a small-to-medium effect size by Cohen (1988), there was a significant difference between the mean scores on students’ listening proficiency.

<table>
<thead>
<tr>
<th>TOEFL</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p</th>
<th>Effect size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>42</td>
<td>32.88</td>
<td>7.513</td>
<td>-2.216</td>
<td>.032</td>
<td>.34</td>
</tr>
<tr>
<td>Post-test</td>
<td>42</td>
<td>35.14</td>
<td>5.762</td>
<td>-2.22</td>
<td>.032</td>
<td>.34</td>
</tr>
</tbody>
</table>

After writing weekly listening logs and classroom lessons for a semester, the students’ listening proficiency improved, resulting in a significant increase in average scores. By combining the test results and analyzing the student's listening history, the conclusion is drawn that maintaining a regular journal would provide an opportunity to reflect on the language learning process and help improve the students' listening proficiency.
5. Discussion

5.1 College students’ metacognitive awareness of L2 listening

This research explored metacognitive awareness in relation to L2 listening proficiency among EFL university students in a foreign language environment.

In addition, the students’ listening logs were examined for a semester to see how they changed over time in terms of what they wrote about the listening process and experience, the use of listening strategies, and changes in their listening skills.

Metacognitive listening strategies awareness including the five subscales of directed attention, mental translation, planning & evaluation, person knowledge and problem solving was used to find out the relationship with the result of listening comprehension. Listening comprehension of EFL university students was found to be significantly associated with the sub-scales of metacognitive awareness, with the exception of planning & evaluation.

In addition, strong relationships were found between listening proficiency and three strategies–directed attention, problem solving and person knowledge. Directed attention is one of the most frequently and commonly reported strategies [35]. Additionally, it is evident that problem solving strategies play a large role in the success or failure in one’s learning as many researchers have argued [7, 36]. Also, person knowledge strategies lower L2 listening anxiety, increase students’ positive beliefs about themselves as good listeners, and motivate them to perform more listening tasks [37].

Unlike other strategies, planning & evaluation strategies have been shown to be unrelated to listening comprehension. Participants are thought to have few opportunities to plan their listening practice and evaluate their listening process in the language class or self-study. Also, the relationship between mental translation and TOEFL scores was weaker than expected since translation is usually regarded to be a disturbing factor for language learning. Learners’ first language could play a positive role and could help understanding in the listening process. In general, although L2 listening scores had a stronger relationship with the overall MALQ scores, they were not significantly correlated with each strategy element of the MALQ.

5.2 Learners’ listening process in listening log

The collected listening logs showed strong evidence that students participated in the process of planning, selecting, monitoring and evaluating their own listening activities that could build self-regulated learning. In addition, they could enjoy listening practice itself without worrying about testing or listening scores. In addition, the student's listening logs provided teachers with an important tool for investigating psychological and social factors affecting language learners [38].

Listening logs by the students provided meaningful and useful information about their listening exercise on summary, response to the content, reflection on your English ability, and listening strategies. Writing listening logs revealed how self-reflective and self-directed the learners were and how much the students liked to share their feelings and experiences with the instructor.

5.3 The change in the listening proficiency during the semester

It was confirmed that as students’ listening proficiency increased at the end of the semester, listening skills can be improved by introducing listening logs along with classroom lessons. The positive correlation shows that students can improve their listening ability by regularly writing a listening log on topics related to the listening class. Accordingly, the analysis of their listening logs showed that most students responded positively to keeping the log on a regular basis, but some mentioned that they struggled to write the log every week despite their strengths and usefulness.

In listening classes, teachers in Korea and other Asian countries usually focus on a test-driven approach to teach learners how to get the correct answers to comprehension questions [5] so as to get a high score on listening tests. Also, usually class time is tight, making it difficult for teachers to ask students to reflect and share issues on their listening process. Even in such a difficult situation, it is believed that teaching learners the processes of how to listen is important so as to cultivate self-directed and regulated listeners [2].

5.4 Comparison between high and low proficiency groups
High proficiency group students used a variety of strategies simultaneously, whereas low proficiency group students used a limited number of listening strategies, regardless of listening strategies. The results of this study, obtained through listening logs, were shown to correspond to another research, which found that more-skilled listeners used more metacognitive strategies than less-skilled counterparts [39]. Oxford [18] argued that successful learners are able to figure out strategies they can do well, analyze given tasks, and then choose the appropriate strategies to meet a variety of situations and conditions.

6. Conclusions

6.1 Summary of findings

This study investigated the relationship between students’ metacognitive awareness of L2 listening and L2 proficiency and what happens in their listening process during the semester through listening logs. Listening is quite challenging and overwhelming for L2 learners because there are many distractors, such as, non-verbal expressions, technical terms, different accents, and fast speed. With the difficulties, metacognitive listening strategies awareness is also one of the most important factors to influence listening comprehension [40]. Likewise, this study led to the similar finding that metacognitive awareness and listening proficiency were significantly related. Along with classroom instruction, writing weekly listening logs helped the students realize their ability to review and reflect on their listening process. Moreover, the study found that most students were enthusiastic about keeping listening logs or recording their learning history throughout the semester, which had a positive impact on improving their listening proficiency.

Writing listening logs can help improve learners’ ability to summarize listening materials, express their feelings and opinions, and most importantly, reflect on their listening strategies and find the most appropriate strategy. In addition, metacognitive instruction with the use of listening strategies provides learners with a means to examine the hidden processes of listening and a form of support structures while working on listening tasks without a teacher [2]. Nevertheless, the long term effect of metacognitive instruction has not been empirically investigated yet. Though the importance of longer training was suggested for metacognitive activity [42], the research did not test the learners’ retention of the strategic knowledge and language performance for a long-term effect. More research should be done to see if metacognitive instruction actually helps students improve their listening proficiency over a long period of time.

6.2 Implications of the study

The significant implication of this study is that the outcome supports reflecting on students’ listening process can develop their metacognitive awareness and improve their listening proficiency. While students listen and write, they will be able to find strategies that work for them so that they can use the best strategies for better listening. In reality, this process-oriented teaching is rarely used especially in EFL educational environment, as it requires considerable time and energy for both students and teachers. However, it should be stressed that learners can get easily bored with the same teaching methods that are used repeatedly over a semester [5]. To effectively utilize listening logs in English classrooms, teachers need to provide a learning environment that can encourage EFL learners to choose listening topics, reflect and share their listening experiences. However, the fact that topics were given by the instructor without any students’ intervention can be a limitation in this study.

It should also be pointed out that learning results and effects may vary depending on the learner’s characteristics and the learning situation. Learners naturally learned strategies over time, but the type and amount of use varied from learner to learner [41]. Therefore, as Annervirta and Vauras [42] stated, challenges of how, when and under what conditions metacognitive knowledge and strategies should be developed remain. Students’ listening logs help teachers learn more about their students with different needs and interests. Without talking with students or reading their journals, it is not easy to know what they think or how their learning is progressing. Furthermore, writing listening logs can help students recognize their listening process, and not just focus on the result, but identify some struggles or difficulties they may not have noticed [43].

When giving feedback on students’ journals, teachers should write comments that support and encourage them because students are very sensitive to the teacher’s evaluation and are easily hurt emotionally. The purpose of feedback should be to motivate learners to keep learning, not discourage them.
Once the right feedback is delivered properly, positive behavior can be strengthened and learners can be re-directed so that learners can learn more successfully. Moreover, Teachers should keep checking and asking if it would be uncomfortable for students to write about their learning process and experiences. A teacher as a researcher should provide students with information on how to use the data and what to do with it.

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Conflicts of Interest: The authors declare no conflict of interest.

References
Appendix A:

Listening Proficiency Test

Part A
Directions: Each item in this part is comprised of a short conversation between two speakers. After each conversation, a third speaker will ask a question. You will hear each conversation and each question only once. After you hear a question, read the four answer choices and circle the letter of the best answer.

1. (A) It was easy.  
   (B) It was about the weather.  
   (C) It was disagreeable.  
   (D) It was disappointing.

2. (A) Go on the ride alone  
   (B) Have a thrill  
   (C) Avoid the ride  
   (D) Urge others to take a ride

Part B

Directions: Each item in this part is comprised of an extended conversation between two speakers. After each conversion, there will be three to five questions. After you have heard a question, read the four answer choices and circle the letter of the best answer.

1. (A) The history of Morocco  
   (B) Temperature differences between modern and ancient times  
   (C) The man’s concern over Jennifer’s absence  
   (D) Jennifer’s experiences on an expedition

2. (A) Two professors  
   (B) Two archaeologists  
   (C) An historian and a student  
   (D) Two students

3. (A) She likes to travel.  
   (B) She’s studying to be an archaeologist.  
   (C) She’s a hard worker.  
   (D) She’s fascinated with Morocco.

Part C

Directions: Each item in this part consists of a talk, or lecture. After each talk, there will be a number of questions. After you have heard a question, read the four answer choices and circle the letter of the best answer.

1. (A) Storms  
   (B) The weather  
   (C) Tides  
   (D) The moon and sun

2. (A) In a planetarium  
   (B) In a classroom  
   (C) On a beach  
   (D) In a laboratory

3. (A) One is a natural force, and the other is not.  
   (B) Only one has been discussed with the students.  
   (C) The causes of tides are known, but not the causes of weather.  
   (D) One is predictable, and the other is difficult to predict.

Appendix B: Metacognitive Awareness Listening Questionnaire (MALQ)

1. Before I start to listen, I have a plan in my head for how I am going to listen.  
   1  2  3  4  5  6

2. I focus harder on the text when I have trouble understanding.  
   1  2  3  4  5  6

3. I find that listening is more difficult than reading, speaking, or writing in English.  
   1  2  3  4  5  6

4. I translate in my head as I listen.  
   1  2  3  4  5  6
5. I use the words I understand to guess the meaning of the words I don’t understand.

6. When my mind wanders, I recover my concentration right away.

7. As I listen, I compare what I understand with what I know about the topic.

8. I feel that listening comprehension in English is a challenge for me.

9. I use my experience and knowledge to help me understand.

10. Before listening, I think of similar texts that I may have listened to.

11. I translate key words as I listen.

12. I try to get back on track when I lose concentration.

13. As I listen, I quickly adjust my interpretation if I realize that it is not correct.

14. After listening, I think back to how I listened, and about what I might do differently next time.

15. I don’t feel nervous when I listen to English.

16. When I have difficulty understanding what I hear, I give up and stop listening.

17. I use the general idea of the text to help me guess the meaning of the words that I don’t understand.

18. I translate word by word, as I listen.

19. When I guess the meaning of a word, I think back to everything else that I have heard, to see if my guess makes sense.

20. As I listen, I periodically ask myself if I am satisfied with my level of comprehension.

21. I have a goal in mind as I listen.

Appendix C: Example of a Student’s Listening Log

How to Gain Control of Your Free Time (11 min 46 sec)
by Laura Vanderkam

1. Summary
In this video, the speaker argues that failing to do important things is not because we lack time. Instead, we fail because we are not determined to do that “important” thing, which means that we do not consider it as a priority. This is proved by an instance that we don’t have seven hours a week to train for triathlon, but we somehow manage to have seven hours to fix a sopping, damaged water heater, an urgent problem. In order to figure out what is important, we can categorize our life into three parts: career, relationship, self. If we list up details in each category, we can focus on priorities and build our life the way we want in the limited time.

2. Response to the Content
Since I was very stressed out with my current situation, having tons of things to get done but having limited time, I chose this video to find a way to manage my time well. Though the content was not what I expected - how to add up small moments to do important things - nevertheless, the video indeed gave me a lesson: every minute one spends is one’s own choice about priority. To put it another way, “I don’t have time to do it,” means “it is not a priority.” Until today, I only set priorities of career, that is, my priorities as a student. As a result, I was extremely stressed when family problems burst out when I have lots of assignments and studies to do. Therefore, I decided to fill my planner in more detail, covering the “relationship” part and “self” part.

3. Reflection on my listening ability
After listening to this video, I found two problems in my listening. Firstly, I understood only 70% of the whole content at the first trial because I lost control of my concentration per 4 minutes. It was because I have difficulty focusing on the speech when the speaker explains the main point further by giving examples. Through this, I realized that I lack listening ability to maintain my attention especially in the area where I think I already know. The other problem was that I had some vocabulary errors while listening. For example, I wrongly
comprehended the word “savor” to “save her”, “DVR” to “devere” which doesn’t even exist, “scintillating” to “skin till lating”, etc. I realized the need to improve my ability to listen accurately and to expand vocabulary.

4. Strategies that I used for the listening

I used three strategies while listening to this video. Firstly, I stopped when I thought I listened to it wrongly and went a few seconds forward because it was literally a “listening” problem, not a meaning problem. Secondly, I took notes in English without stopping the video when I thought the sentence she just spoke is the main point. Since I had to take notes quickly, I only wrote some key words, not the whole sentence. Lastly, I listened to the video twice because I missed some details while she was giving examples. As a result, I paid more attention on the main points at the first trial, and specific details in the second trial.