“Listen with or without pictures?”
The Effects of Visual Aids on Vocational High Students’ Listening Comprehension

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篇名：
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I. INTRODUCTION

A. Background Information

In Taiwan, for vocational high school students, though they have been spending more than 3 years studying English, some of them still consider that they can not be very proficient in English listening, speaking, reading, and writing. Many students think they especially have difficulties in English listening and speaking. In other words, they can not comprehend what people say in English, and have no idea what and how to response in English. In this case, the present study would be emphasized on English listening comprehension in order to find out an effective learning way; on the other hand, to experiment students’ listening comprehension by listening with/without visual aids.

B. Purposes of the Study

The purpose of this study was to examine the effects of visual aids on vocational high school students’ listening comprehension process. More specifically, the study was to investigate whether visual aids could help students comprehend, and how visual aids could help them in the process of listening to a story. The hypothesis was that visual aids would provide contextual cues to a listening passage which would enhance listeners’ comprehension.

C. Research Questions

The research questions of the study are addressed as below:
1. What are the effects of visual aids on vocational high school students’ listening comprehension?
2. What are the effects of visual aids on high-proficient listeners?
3. What are the effects of visual aids on low-proficient listeners?

The study hoped to find a way of integrating listening and visual aids in order to make learning process more effectively as well as to find out the instructional values of visual aids from this experiment for teaching listening comprehension.
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II. REVIEW OF THE LITERATURE
A. Definition of Term—Visual Aid

According to Oxford Advanced Learner’s Dictionary, the definition of “visual” refers to a picture, map, piece of film, etc. used to make an article or a talk easier to understand or more appealing. “Visual aid” refers to a picture, film, video, etc. used in teaching to help people learn or understand something. Similarly, in Cambridge Learner’s Dictionary, “visual aid” is defined as something that helps people understand or remember information, such as a picture or films.

B. Functions of Visual Aids

In 1980, Mueller claimed that instructional visual aids were being used in varying degrees at all levels of foreign language instruction. Visual aids are intertwined with virtually all facets of the teaching-learning process. The study pointed out that teachers are often led to believe that “the more visuals the better” is a sound strategy. Mueller also pointed out that while there were some intuitive reasons for using visuals in various instructional tasks, supports for promoting the use of visual aids in language teaching were virtually nonexistent.

Moreover, According to the previous studies (Mueller, 1980; Levie & Lentz, 1982; Ginther, 2002), the studies found that the visual before hearing the passages seemed to result in the greatest amount of listening comprehension recall. In conclusion, the Visual-Before treatment was most effective for the three of the following reasons: (1) the visual served as an advance organizer, which activated relevant elements of stored memory, and brought them to bear on the comprehension process; (2) in seeing the overall context first, students were less likely to formulate wrong hypotheses and, consequently, better able to guess the meaning of unfamiliar words and phrases; and (3) seeing the visual before hearing the passage heightened the students’ interests and caused them to pay closer attention to the passage.

III. METHODOLOGY
A. Subjects

The subjects for this study consisted of 6 students from a high school affiliated vocational high school in Taipei. According to the GEPT test (Intermediate level) which they had joined, 6 participants were separately divided in to the group of
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“high-proficient listeners” and “low-proficient listeners” based on the scores on the listening section. The detailed information of the participants is as below.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Gender</th>
<th>Major</th>
<th>Listening scores</th>
<th>Category of Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Female</td>
<td>English</td>
<td>120</td>
<td>High-proficient</td>
</tr>
<tr>
<td>B</td>
<td>Male</td>
<td>International Trade</td>
<td>118</td>
<td>High-proficient</td>
</tr>
<tr>
<td>C</td>
<td>Female</td>
<td>English</td>
<td>105</td>
<td>High-proficient</td>
</tr>
<tr>
<td>D</td>
<td>Male</td>
<td>Commercial Arts</td>
<td>76</td>
<td>Low-proficient</td>
</tr>
<tr>
<td>E</td>
<td>Female</td>
<td>Multimedia Design</td>
<td>70</td>
<td>Low-proficient</td>
</tr>
<tr>
<td>F</td>
<td>Male</td>
<td>Computer Science</td>
<td>68</td>
<td>Low-proficient</td>
</tr>
</tbody>
</table>

* In GEPT test, it included both listening and reading section, and the passing scores of each part in GEPT is 80 (full score is 120). Based on this rule, the criteria for high- and low-proficient listeners will be defined based on the scores of “80.”

B. Experiment Design

During the experiment, the six participants will separately be experimented to listen to the story with and without visual pictures. For the “Experimental group,” the participants (both high- and low-proficient listeners) were examined to listen to the story with visual pictures; however, for the “Control group,” the participants (both high- and low-proficient listeners) were examined to listen to the story without visual pictures.

C. Material

The listening passages of the story used in this study were selected from a storybook called “The Elves and the Shoemaker” published by the Reading House of Caves Books. The story “The Elves and the Shoemaker” for this experiment was consisted of 12 contextual visual pictures and a taped story of approximately 365 words in English (see Appendix). The contextual visual pictures were produced by professional illustrators according to the author’s specifications for the story. Visual pictures were designed to provide the information which could be obtained from the listening passages. However, the purpose of the visual pictures were not to solve a problem or puzzle presented in the passages, but to provide a framework within which the listening passages could be understood.

D. Procedures of Data Collection

In the study, the research method, think aloud, was adopted. Before the formal experiment was proceeded, every participant was taught to use “think aloud task” for
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the later experiment and interview. To better the procedures and the interpretation of
the experiment as well as the interview, expect the taped story was recorded in
English, all the explanations and directions were in Mandarin Chinese. In the formal
experiment, all the participants were experimented and interviewed individually
according to the arranged schedule. And the whole experimental procedures were as
below.

Table 2. The whole experimental steps and process

<table>
<thead>
<tr>
<th>Part</th>
<th>Experimental steps and process</th>
</tr>
</thead>
<tbody>
<tr>
<td>listening</td>
<td>2. The instructions of think-aloud method. (in Chinese)</td>
</tr>
<tr>
<td>without visual pictures</td>
<td>3. Listen to the story without visual pictures twice. (in English)</td>
</tr>
<tr>
<td></td>
<td>4. 1 minute for the recall and the reorganization of the story after listening.</td>
</tr>
<tr>
<td></td>
<td>5. Interview with Q1. (in Chinese)</td>
</tr>
<tr>
<td>Part 2:</td>
<td>1. Listen to the story with visual pictures twice. (in English)</td>
</tr>
<tr>
<td>listening</td>
<td>2. 1 minute for the recall and the reorganization of the story after listening.</td>
</tr>
<tr>
<td>with visual pictures</td>
<td>3. Interview with Q2, Q3 &amp; Q4. (in Chinese)</td>
</tr>
</tbody>
</table>

Here were the interview questions in this experiment. They were conducted in
Chinese, and then translated into English for the study as follows:
1. Would you please describe the story?
2. Would you please describe the story again?
3. What differences do you find while listening with/without visual aids? (For this story)
4. Do you think visual aids are helpful from this experiment?

During the listening process in the experiment, participants were allowed to take
notes or write down certain vocabulary or phrases on the given paper. However, to
ensure standardized procedures and validity across the experiment, all the participants
were not allowed to ask further questions about the story as well as the unknown
words they hear during the experiment.

E. Data Analysis

After collecting the interview transcripts of listening to the story with and
without visual pictures, each of the participants were scored according to their
interview transcript and notes. However, in order to ensure the reliability of the
experiment and the scoring process, “Inter-rater Reliability” was conducted. On the
other hand, another scorer was invited to assist the scoring process and the evaluation
of each participant’s comprehension to the story.
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IV. RESULTS AND FINDINGS

Through analyzing and scoring the interview as well as the experimental transcripts of each participant, the experimental results of high-proficient listeners (see Table 3), the experimental results of low-proficient listeners (see Table 4), and the experimental results of high- and low-proficient listeners (see Table 5) are shown as below.

A. The Experimental Results of High- and Low-Proficient Listeners

From Table 3 to 5, obviously, the scores between listening to the story with and without visual pictures of each participant can be seen in the experiment. In addition, based on “the percentage of the increasing scores,” the percentage of the scores of each participant can clearly be observed.

Table 3. The experimental results of high-proficient listeners

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Participants</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td></td>
<td>42</td>
<td>54</td>
<td>74</td>
<td>56.6</td>
</tr>
<tr>
<td>(listening without visual pictures)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental group</td>
<td></td>
<td>82</td>
<td>66</td>
<td>88</td>
<td>78.6</td>
</tr>
<tr>
<td>(listening with visual pictures)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The percentage of the increasing scores (%)</td>
<td>95%</td>
<td>22%</td>
<td>19%</td>
<td>39%</td>
<td></td>
</tr>
</tbody>
</table>

From Table 3, Participant A, B, and C had improvements while listening to the story with and without visual pictures during the experiment. Generally, because the participants in this group were categorized into “high-proficient listeners,” most of them had already comprehended most of the story while listening to the story without visual pictures. There were no big differences and improvements between listening to the story with or without visual pictures. However, in this group, Participant A had made the biggest (95%) improvements in the experiment than others.

Table 4. The experimental results of low-proficient listeners

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Participants</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td></td>
<td>16</td>
<td>8</td>
<td>16</td>
<td>13.3</td>
</tr>
<tr>
<td>(listening without visual pictures)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental group</td>
<td></td>
<td>52</td>
<td>48</td>
<td>30</td>
<td>43.3</td>
</tr>
<tr>
<td>(listening with visual pictures)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The percentage of the increasing scores (%)</td>
<td>225%</td>
<td>500%</td>
<td>86%</td>
<td>225%</td>
<td></td>
</tr>
</tbody>
</table>

However, From Table 4, significantly, Participant D, E, and F had great and...
obvious improvements on the scores while listening with and without visual pictures during the experiment comparing to Table 3. Surprisingly, to analyze the scores of listening to the story with and without visual pictures, the improvement that Participant E had was up to 500% in this group, and the Mean score was up to 225%. For this group, it can be observed that “visual aid” indeed had huge influences on their listening comprehension process.

Table 5. The experimental results of high- and low-proficient listeners

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Participants</th>
<th>High-proficient Listeners</th>
<th>Low-proficient Listeners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Control Group</td>
<td></td>
<td>42</td>
<td>54</td>
</tr>
<tr>
<td>(listening without pictures)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental Group</td>
<td></td>
<td>82</td>
<td>66</td>
</tr>
<tr>
<td>(listening with pictures)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The percentage of the increasing scores</td>
<td></td>
<td>95%</td>
<td>22%</td>
</tr>
</tbody>
</table>

From Table 5, generally, it can be proven that experimental groups had scored significantly better than the other. It can be believed that the visual pictures during the experiment in the study indeed have made differences and improvements in participants’ listening comprehension process.

B. More Detailed Information and Analysis on Participants

1. Example of Participant A (High-proficient Listener)

Take “Participant A” who made the biggest improvement in her group for example, in her first experiment (listen to the story without visual pictures), she comprehended and recalled 21 out of 50 items in the story. However, in her second experiment (listen to the story with visual pictures), she comprehended 41 out of 50 items in the story, and made progress about 20 items more than she had in the first experiment, such as “a rainy day,” “let’s make some shoe,” “tomorrow I will help you make some shoes,” “3 dollars,” and etc.

During the interview after the experiment, Participant A pointed out that in the first experiment (listen to the story without visual pictures), she could not comprehend some certain parts of the story; however, in the second experiment (listen to the story with visual pictures), visual pictures indeed helped her a lot while comprehending the whole content of the story. In addition, visual pictures helped her modify and correct several items for the story, such as “the weather,” “who helped them make
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shoes,” and “the number of money,” and etc. After this experiment, she strongly agreed that visual pictures could help learners’ listening comprehension. At least, she could comprehend those paragraphs in the middle of the story after seeing these visual pictures. Visual pictures also helped her make an inference of an unknown word “elves.”

2. Example of Participant E (Low-proficient Listener)

Similarly, for low-proficient listeners, “Participant E” was considered to be as a good example because she made an amazing improvement which was up to 500% in this group. In her first experiment (listen to the story without visual pictures), she comprehended and recalled only 4 out of 50 items in the story. However, in the second experiment (listen to the story with visual pictures), she comprehended 24 out of 50 items in the story. In her first experiment, she only comprehended several sentences and could not understand other parts of the story. She misunderstood some content of the story. She said the couple would like to make money, and then buy “new clothes,” and “the television.”

During the interview, Participant E pointed out that in her first experiment, she could not comprehend most of the content and was not confident about what she recalled later. She could not combine together all what she heard from the passages into a story, and could simply make some guessing about the story instead. However, in the second experiment, she could accomplish the content of the story by visual pictures, and could have a clear idea about the content of the story and its order. Also, visual pictures helped increase her memorization.

V. CONCLUSIONS

Based on the findings of the experiment, it was apparent that appropriate contextual visual aids can enhance listening comprehension recall and most listeners could indeed improve their comprehension through listening to the story with visual pictures. Both high-proficient and low-proficient listeners comprehended the story better during the experiment of listening to the story with visual pictures because they had a chance to re-recognize the feature of the story contents and words they did not recognize and comprehend. Most importantly, the beliefs of “visual aids” referred to “a picture, film, video, etc. used in teaching to help people learn or understand something” as well as “something that helps people understand or remember
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information, such as a picture or films” were indeed discovered in the study.

From an overall review of the reflections and opinions from the participants, listening to the story without visual pictures would (1) be difficult to understand the main ideas of the content; (2) feel unsure about what have heard; (3) make mistakes by guessing; (4) have no idea how and what to listen to; and (5) feel nervous because of the poor listening ability as well as the lack of the vocabulary. However, on the other hand, listening to the story with visual pictures would (1) help organize and recall the order of the main content; (2) help comprehend the vocabulary; (3) help modify some mistakes of previous comprehension; (4) help lead students to the story and the content; (5) help students image and increase imagination; and (6) help memory storage.

In conclusion, here were some significant pedagogical implications for English teaching in the future:

1. English listening ability needs to be trained. Do not always depend on visual aids as well as pictures from the outer environment because there would never have visual aids when you listen to an English speech or talk to someone.
2. Visual aids should especially be taken into account while teaching those English listening beginners.
3. Visual pictures would increase students’ interests and attention. This is why most students love reading books with both pictures and words, such as comic books or magazines.

VI. Reference

楊玉瑩 (2004). The Elves And the Shoemaker. 臺北市：敦煌書局。
Appendix

The Story — “The Elves and the Shoemaker”

Experimental judgment and criteria for the content
(Each of the 50 items marked stands for “2” points.  Total score of the story is “100”)