Teaching presentation with “no-tech” visual aids
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Teaching presentation with “no-tech” visual aids

Akiko Kano
Junior College Division, Sophia University

Reference data:

Abstract
Presentation skills can be taught effectively without the use of personal computers, and students can improve their presentations without high-tech equipment. A practical “no-tech” method used in teaching presentation skills classes which focus on creating and utilizing effective visual aids will be introduced in this paper. “No-tech” visual aids are easy to create and use, but are often more efficient and effective than software slides. They also allow teachers who are often restricted by equipment shortages and the frustration of time-consuming technical problems, to focus on teaching how to make a presentation. The process of creating “no-tech” visual aids helps students understand the importance of organizing their presentations. The key points students learn while they are creating effective “no-tech” visual aids are easily transferred into computer software-based presentations.

本研究ではプレゼンテーション・スキルをパソコン無しで教えることを可能にし、学生にハイテク機材を使わせなくてもプレゼンテーション力向上させ得る方法として「no-tech」ヴィジュアル・エイド方式を紹介する。発表者はこの手法を用いて、プレゼンテーションにおいて効果的なヴィジュアル・エイドの作成と活用に焦点を当てた実際的な授業を行ってきた。「no-tech」ヴィジュアル・エイドは作りやすく使いやすいうえ、しばしばパソコン上のスライドショー・ソフトウェアを使うより実用的で効果的である。「no-tech」ヴィジュアル・エイドを使うことによって、日頃から機材の不足などの物理的制約を受けたり機材操作に関わるトラブルなどで時間を無駄に費やしてしまうような事態に陥ることなく、プレゼンテーション自体の指導に集中できるようになる。「no-tech」ヴィジュアル・エイド作成の過程で学生はプレゼンテーションの構成の重要性を自ら学ぶ。さらに、効果的な「no-tech」ヴィジュアル・エイドを作るために学ぶ重要なポイントはそのままパソコン上のスライドショー・ソフトウェアを用いたプレゼンテーションへと応用することが可能である。
In a high-tech world where students are so used to electronic devices such as videogames, computers and smartphones, giving a multimedia presentation may seem quite an easy task. But teachers often face unexpected difficulties when they ask students to create and give high-tech, computer assisted presentations in classrooms. In this paper I would like to introduce the effectiveness and usefulness of “no-tech” visual aids (Dale & Wolf, 2006), and suggest their use as an entry-level visual aid device. This type of visual aids helps students focus more on the content and delivery, and will help teachers plan classes with more time for students to actually give presentations. “No-tech” visual aids are a great way to effectively teach students how to create and give short presentations.

In today’s computer-based world, a “presentation” is usually considered to be a kind of high-tech talk which typically uses a slideshow created on a personal computer and projected onto a monitor or screen. Most teachers who assign a “presentation” in class expect students to use such high-tech equipment. However, lack of access to this type of equipment is a common problem in many schools. The number of audio-visual and computer rooms is limited, and there are often scheduling and logistical problems that waste valuable preparation and class time. Sometimes, teachers must make their own arrangements to borrow a laptop, projector, and portable screen; carry them to class, connect the cables, and then do all the start-ups and adjustments of the electronic devices before the class presentations can even begin. Even for teachers who are familiar with modern equipment, unexpected technical problems often occur. For example, the school’s computer network may be complicated and difficult to access, a student’s USB memory stick may be unreadable by a school computer, a slideshow file a student made and brought might not open, slideshow animations, layouts and fonts might not work on a different computer, plus students sometimes bring the wrong file and do not realize it until the last moment.

Being able to give high-tech presentations using a laptop is a must-have skill for today's young people. I absolutely recognize there is a need to teach such skills to university students. But rather than going straight to slideshow presentations, students can learn basic presentation skills in a more time-efficient, organized way by creating and using “no-tech” visual aids. In this paper, I will first explain why it is helpful for both teachers and students to use “no-tech” visual aids. Next, I will use data from a student survey to explain the need to spend more time on students’ presentations in class. The results of the survey suggest that Japanese university students lack experience in the basics of public speaking, and that they need entry-level practice before they can confidently move on to high-tech presentations. Finally, I will illustrate how teachers can conduct a presentation class with the extra time made available by using “no-tech” visual aids, by outlining a lesson plan with six very short presentations.
**Types of “no-tech” visual aids**
The term “no-tech” visual aids (Dale & Wolf, 2006) refers to flipcharts, poster boards, blackboards, whiteboards, and actual physical objects which speakers use as visual aids while conducting their presentation. Dale and Wolf contrasted this term with “low-tech” visual aids such as overhead transparencies, films and videotapes, and “hi-tech” visual aids as such as image galleries and PowerPoint slideshows.

**Materials needed to create “no-tech” visual aids**
“No-tech” visual aids are those which can be created using readily available materials. In my classes, I suggest students use sketchbooks, individual sheets of drawing paper, or large sheets of paper. After trying several types, most students prefer to use a ring bound sketchbook. The reasons they give for this choice is that the sketchbook is the easiest to handle when they are holding it up and flipping the pages in front of an audience. Additionally, the sketchbook itself often becomes a memento of their speech or presentation and gives them a feeling of achievement.

The sketchbooks my students usually use are easily available at hundred-yen shops. They are B4 or A3 size, with 10 to 20 pages of drawing paper, and are bound with a spiral, cork-screw shaped binder. Marker pens of various colors and size are used for the text and drawings. Some students paste cutouts, photos, clippings of articles, and printouts of Word-documents on their sketchbook pages.

**Samples of “no-tech” visual aids**
The following images show students holding up their “no-tech” visuals. The charts and drawings are effective because they help the audience grasp the idea of the presentation. The lines are bold and clear, and the information that can be put into one page is limited, thus avoiding information overload. Due to space limitations, the number of words, lines, graphs, and charts on each page is restricted.
Reasons for using “no-tech” visual aids

Easy to create

Creation of “no-tech” visual aids does not require personal computers, digital equipment or any special skills. All the students need is a sketchbook and some pens and other drawing materials they may already have at home. Some students are artistic, some are not, but even for those who are not, there are still many ways to create simple, yet effective, visual aids. Reynolds (2008, 2010) and Williams (2010) give practical hints about how to create simple and effective visual aids.

When preparing a high-tech presentation, students often put so much time and energy into creating a slideshow on a computer that when it is done, they feel they have already done so much work that they should be ready for their presentation. But to deliver a presentation effectively they need to practice. A large portion of the students’ preparation time and energy should be spent on practicing and rehearsing the presentation. Restricting the use of computer assisted visual aids helps students become more receptive to the other elements that make a presentation good, and encourages them to practice more.

Another practical reason for using “no-tech” visual aids as a starter tool when teaching presentation skills to university students is that many of them do not have slideshow software (for example, Microsoft PowerPoint) installed on their home computers. Typically in Japan, many computers sold in retail stores do not include pre-installed presentation software. Students must buy and install this software separately, which not many of them do. So students have to stay on campus
in order to prepare for their presentations. If the school’s computer room is closed or occupied, they cannot prepare.

Even when students have easy access to computers equipped with presentation software, the time and effort they spend is enormous if they are novices. Referring to the images in Figure 1, computer-novice students would need a lot of time to learn the skills needed to create the digital equivalents of these illustrations and charts.

**Easy to handle in class**

Another strong reason for going “no-tech” is that neither teachers nor students need to bother about setting up equipment. This results in significant time savings. Class time for presentations can be allotted much more accurately. Teachers can plan to have students’ presentations during any part of the class, and can move smoothly and swiftly from one presenter to the next without technical interruptions.

Visual aids created in sketchbooks also provide consistent quality regardless of the room. Students know exactly how their visual aids will appear, while digital slides projected as images on a screen or monitor are often less effective than the student intended. Typically when a room is not dark enough, the contrast and color of the visual images is poorly reproduced. Sometimes, when played on a different computer from the one used for creation, animations do not run smoothly. Such problems are avoided when a student is presenting with “no-tech” visual aids.

**Students learn how to organize a presentation**

“No-tech” visual aids can be created freehand without digital constraints, so as soon as students come up with an idea, they can visualize it by drawing sketches and diagrams. Organizing visually helps students grasp the overall flow of their speech. Students learn how to transform their ideas into a structured speech through freehand creation process. They also notice that even a simple, primitive visual aid can be quite effective in conveying ideas and information, and recognize the efficiency of using visual aids.

I instruct students to create simple “slides,” that is, visual aids, on sketchbook pages, which the audience can easily see and read. If students want to confirm that their visual aids are readable, all they have to do is to stand a few meters away from their sketchbook, imagining the size of their classroom and the distance between the presenter and the audience in the back row. In this way, students can physically estimate the amount of information they should put in each visual aid.

The number of pages in a sketchbook is limited, which means students are restricted in the number of “slides” they can use in a presentation. Thus, students automatically make the content of their presentation simple and tight. Students have to think not only of how to begin a presentation
but also how to end it within a certain number of “slides,” which keeps them conscious of the structure. Limitation of pages forces them to summarize their ideas, and organize them in an appropriate way to fit into the sketchbook.

“No-tech” visuals work as a bridge to multimedia presentations
“No-tech” presentations are not always effective, but from my experience, they work very well with short presentations with students who have little experience in public speaking. Due to their time efficiency and easiness of use, “no-tech” visual aids are helpful as entry-level device to teach the basics of presentation. Manually created images give students the basic knowledge of how to create effective slides, what to put into each slide, and how to organize them. Creation of “no-tech” visual aids serves as scaffolding in building presentation skills, and the experience can be efficiently converted to creating visual aids for multimedia presentation using computer slideshow software.

Japanese students need more experience speaking in public
After several years experience with students in high-intermediate to advanced levels of general English proficiency I began to wonder why such students were less confident when it came to speaking English in public. In pairs and in groups they were relaxed and enthusiastic, but when I asked them to prepare and give a five-minute speech in class, the result was very frustrating for everyone. The speeches may have been suitable for a writing assignment but when they were delivered orally they left much to be desired. Students did not look up from their notes and often did not make sufficient eye contact with the audience. Their voices were weak and monotonous, as if they were talking about something very uninteresting. Most of the students did not even consider using visual aids of any form. The big gap between what they could achieve in a general English class and their poor performance in public speaking made me notice these essential skills are missing in junior and senior high school English classes in the Japanese educational system.

Survey on public speaking experience in junior/senior high school
To find out what the students themselves thought of their public speaking skills, I conducted a survey with students from three universities. One hundred and forty students from seven classes took part in the survey. Except for a few repeaters, the students were either first or second year students.

The main focus of the survey was to determine if students had any experience with public speaking in English in their junior/senior high schools. The question asked was: Did you do any public speaking in English during Junior and Senior high school?
Sixty-four percent of the students answered in the negative. To avoid ambiguous answers, the possible negative responses were scaled to include “No,” “Not at all” and “almost none,” while affirmative answers included “Yes,” “Many times,” and “a few times.” The low percentage of public speaking experience was unexpected since the students were mostly high-intermediate to advanced levels, with TOEIC scores ranging from approximately 700 to 900.

The comments in the free description section of the survey suggested that some students had personally practiced giving speeches as an extracurricular activity, and some had participated in speech contests. However, few students had had public speaking experience in English as part of their school curricula. The students came from a wide variety of schools; private and public, co-ed, all-male, and all-female, and were located throughout Japan.

After this survey was concluded, I talked with many of the students and asked them personally about their speech and presentation experiences at school. Through these conversations I realized that the students seldom received structured instruction about how to give a speech or presentation in Japanese, let alone in English. In other words, a large portion of the students had not been taught how to give a speech or presentation, and had not made one until they entered university.

To fill this gap, I designed a very basic step-by-step course for teaching speech and presentation to Japanese students. Assuming that the majority of them had little experience, the course focused on giving them as much opportunity as possible to actually give speeches and presentations. After several semesters of trial and revision, the course started to run smoothly and efficiently.

A course using “no-tech” visual aids for teaching speech and presentation to Japanese students
A Sample semester course

It is a one-semester course and students are required to give a total of six speeches and presentations. Table 1 shows the types of speeches and presentations.

Table 1. Speech and presentation assignments in a semester course

<table>
<thead>
<tr>
<th>topics</th>
<th>types of speech/presentation</th>
<th>visual aids</th>
<th>allotted time*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Introducing myself</td>
<td>spontaneous, icebreaking</td>
<td>none</td>
<td>1 min.</td>
</tr>
<tr>
<td>2 What I’m good at</td>
<td>show &amp; tell</td>
<td>an object</td>
<td>2 min.</td>
</tr>
<tr>
<td>3 A place I/we recommend</td>
<td>informative displaying</td>
<td>photos, maps, charts, etc. on a large</td>
<td>3 min.**</td>
</tr>
<tr>
<td></td>
<td>visual aids</td>
<td>poster</td>
<td></td>
</tr>
<tr>
<td>4 How to use an item</td>
<td>informative explaining</td>
<td>flipcharts or sketchbooks</td>
<td>2~3 min.</td>
</tr>
<tr>
<td></td>
<td>procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Selling an item</td>
<td>informative plus persuasive</td>
<td>flipcharts or sketchbooks</td>
<td>3~5 min.</td>
</tr>
<tr>
<td>6 Asking for a small change</td>
<td>persuasive</td>
<td>flipcharts or sketchbooks</td>
<td>5 min.</td>
</tr>
</tbody>
</table>

*Time allotted for each speech or presentation varies depending to the number of students in a class.

**With large classes, this is done as a group presentation.

Table 2 shows a brief course outline, consisting of 14 lessons, appropriate for a class of 25 to 35 students. This is an extract from a more detailed course outline with In Charge 2 Second Edition (Daise, 2003) and Speaking of Speech New Edition (Harrington & LeBean, 2009) as textbooks. After they learned the basic concepts and practiced practical tips for good delivery, students had to prepare a very short speech almost every other week. Use of “no-tech” visual aids made this fast pace possible.

Table 2. Course outline of a semester course for beginners of speech and presentation

<table>
<thead>
<tr>
<th>week</th>
<th>speech/presentation</th>
<th>lesson</th>
<th>purpose of lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introducing myself</td>
<td>introduction</td>
<td>speak in a loud, clear voice</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>group work activities</td>
<td>don’t be afraid of making mistakes</td>
</tr>
<tr>
<td>3</td>
<td>group work activities</td>
<td>learn importance of physical message</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------</td>
<td>---------------------------------------</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>What I’m good at</td>
<td>using objects as visual aids</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>structure and organization</td>
<td>how to organize a five-paragraph speech with Introduction, Body and Conclusion</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>visual aids</td>
<td>how to create good visual aids: good and poor samples</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>A place I/we recommend</td>
<td>using “no-tech” visual aids effectively</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>how to begin and end a speech</td>
<td>starting with a “hook” and ending with a strong, memorable ending</td>
<td></td>
</tr>
<tr>
<td></td>
<td>importance of delivery</td>
<td>types of speech and what to take care of when preparing an informative speech</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>How to use an item</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>persuasive speech</td>
<td>what to consider when preparing for a persuasive speech</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Selling an item (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Selling an item (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Asking for a small change (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Asking for a small change (2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the first class, students were asked to give a spontaneous speech in the form of a one-minute self introduction. The next few classes provided basic instructions on effective delivery, i.e., keeping good eye contact, speaking in a loud and clear voice with sufficient inflection, using appropriate gestures, and the general do’s and don’ts of public speaking. Students worked in groups and had a chance to practice their public speaking skills in a non-threatening environment. These workshop-style lessons helped them overcome their shyness and fear, and brought a sense of...
togetherness to the class. This sense of camaraderie later made it easier for students to open up and express themselves when they spoke in front of the class. There was a supportive atmosphere throughout the semester, and the first few lessons were vital in helping to build it.

**Students learn from each other**

A simple peer evaluation system was used for evaluating students’ speeches and presentations. Each student was given a “peer feedback form” in which they scored and wrote comments for all the classmates. The appendix contains a sample peer feedback sheet.

The feedback forms were collected and the students’ scores were calculated to produce an average for each speaker. This became the “students’ score.” A “teacher’s score” was also given to each student. From these two scores, students were able to receive their evaluation in an objective, straightforward way. Students were told that both the “students’ score” and “teacher’s score” for all their performances would be used to calculate their final grades.

Students were asked to write a short comment for each speech about “what was good,” and “what could be done to make it better.” The comments were written in a positive manner, i.e., “speak in a louder voice” instead of “I couldn’t hear.” During a feedback session of four to five minutes students moved around the class, found a student to pair up with, and shared their comments.

The scores and feedback comments were one part of the peer learning process. Students learned a lot from observing their classmates’ speeches and presentations. They learned what worked well and what they should avoid, and were able to see different styles of performances based on the different personalities of each student. Students noticed that those with higher English skills were not always the best presenters, and thus realized the benefits of good preparation and practice. Overall, peer observation encouraged the students to be more imaginative and creative, and to prepare well and practice hard.

**Conclusion**

“No-tech” visual aids are easy to create, easy to handle, and allow class time to be used more efficiently. By introducing the use of “no-tech” visual aids, teachers can give students more time to practice giving short speeches and presentations within a semester course. Survey results indicate that Japanese university students lack experience and practice in public speaking. Given the opportunity to see other students’ performances, students are able to learn from their peers. Furthermore, creation and use of “no-tech” visuals aids help them learn the basics of speech and presentation. These skills serve as the foundation for further constructive multimedia presentations.
References

Appendix
Sample peer feedback sheet

<table>
<thead>
<tr>
<th>FEEDBACK TO YOUR CLASSMATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT NO.</td>
</tr>
<tr>
<td>No.</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>19</td>
</tr>
<tr>
<td>20</td>
</tr>
</tbody>
</table>
REFERENCES

Teaching presentation with effective visual aids

references

Akiko Kano
Sophia Junior College
akikano@jrc.sophia.ac.jp

1. Results from a survey

Public Speaking Experience in Junior/Senior High School

"Did you have any public speaking experience in English during Junior and Senior high school?"

140 students (freshmen / sophomore)
7 classes from 3 universities

<table>
<thead>
<tr>
<th>yes</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>

138 students (n=140)

Why use no-tech visual aids?

1. Easy to create, easy to use.
   ◆ Do not require personal computers, digital equipment or special skills.

2. Easy access.
   ◆ Students without slideshow software on their home PCs can work at home.

3. Easy for PC-novice.
   ◆ Enormous time and effort need not spent to create images and charts.

overview

1. Results from a survey
2. A sample course using “no-tech” visual aids
3. “no-tech” visual aids
   --- WHY and HOW
4. Useful tips for teaching presentation

Speech and presentation assignments in a semester course

<table>
<thead>
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<td>none</td>
<td>1 min.</td>
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<tr>
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<td>show &amp; tell</td>
<td>an object</td>
<td>2 min.</td>
</tr>
<tr>
<td>A place I’ve recommended</td>
<td>informative</td>
<td>displaying visual aids</td>
<td>photos, maps, charts, etc. on a large poster</td>
</tr>
<tr>
<td>How to use an item</td>
<td>informative</td>
<td>Explaining procedures</td>
<td>flipcharts or sketchbooks</td>
</tr>
<tr>
<td>Setting an item</td>
<td>persuasive</td>
<td>informative plus persuasive</td>
<td>flipcharts or sketchbooks</td>
</tr>
<tr>
<td>Asking for a small change</td>
<td>persuasive</td>
<td></td>
<td>flipcharts or sketchbooks</td>
</tr>
</tbody>
</table>

Why use no-tech visual aids?

4. Easy to handle in class.
   ◆ No need to set up digital equipment (PCs, projectors, screens/monitors.)

5. Time-saving.
   ◆ Can move on smoothly and swiftly from one presenter to the next.

6. Easy to plan ahead.
   ◆ Class time for presentations can be allotted much more accurately.
Why use no-tech visual aids?

7. Provide consistent quality.
   ◆ Digital slides may come out less effective than planned.

8. More focus on the speaker.
   ◆ The audience will watch the speaker, not the monitor or screen.

9. More eye-contact required.
   ◆ The speaker and the audience see the need to “communicate.”

10. Students learn how to organize a presentation
    ◆ Freeword creation allows students to produce immediate results without digital constraints.
    ◆ Students can easily visualize the importance of organizing their presentations in a simple structure.

11. Students notice effectiveness of visuals
    ◆ Even a simple, primitive visual aid can be quite effective in conveying ideas and information.
    ◆ Students recognize the efficiency.

12. Students learn how to create simple “slides”
    ◆ Students can use physical estimates to easily limit the amount of information in each visual aid.
    ◆ Copy-and-paste syndrome is eliminated. Forces summary and outline ‘thinking’.

13. Work as a bridge to multimedia presentations
    ◆ ‘No-tech’ presentations can be converted to effective multimedia presentations.
    ◆ Time efficiency and easiness of use make it helpful as entry-level device to teach the basics.

Sample semester course
A sample semester course with six very short no-tech presentations in OWE semester

Tools
1. Introducing Myself (unrestricted)
2. What I’m Good At (unrestricted)
3. A Place I’d Recommend (unrestricted)
4. How to Use an Item (unrestricted)
5. Selling an Item (unrestricted)
6. Asking for a Small Change (unrestricted)

Sample peer evaluation sheet
(group)

Sample peer evaluation sheet
(individual)
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- Presentation Fear—Eight ways to cope with and overcome it
- Presentation Magazine
  [http://www.presentationmagazine.com/presentation_nerves.htm](http://www.presentationmagazine.com/presentation_nerves.htm)

- Ambassador Susan Rice at 2010 Stanford Commencement
  Ambassador Susan Rice addresses the class of 2010 at Stanford’s 139th Commencement ceremony June 13.

- J K Rowling speaking at Harvard Commencement 2008
  [http://video.the-leaky-cauldron.org/video/1027](http://video.the-leaky-cauldron.org/video/1027)

Textbook

English Essentials (2010)
English Essentials is a skills handbook produced by Sophia Junior College for our students.

Good speech samples
From: Sophia Junior College “English In Action” website
[http://sites.google.com/site/ziawebsite/english-essentials](http://sites.google.com/site/ziawebsite/english-essentials)

- Steve Jobs’ 2005 Stanford Commencement Address (transcript available)
  Address given by Steve Jobs, CEO of Apple Computer and of Pixar Animation Studios.

- Highlights of address by Oprah Winfrey; 2008 Stanford Commencement Address

- Fighting Hunger Conference - UN Secretary General Kofi Annan’s Speech
  At an international hunger conference to mark World Food Day, former UN Secretary General Kofi Annan in his keynote speech.

- President Barack Obama’s Inaugural Address (transcript available) January 2009
  [http://www.whitehouse.gov/blog/inaugural-address/](http://www.whitehouse.gov/blog/inaugural-address/)
  President Obama delivered his Inaugural Address, calling for a "new era of responsibility."
Patterns of Lexical Cohesion in Writing Samples of Japanese High School Students: What can Lexical Cohesion Tell us about the Development of Writing skills?

Tomoyo Okuda

Abstract

The present study attempts to examine characteristics of lexical cohesion in Japanese EFL high school students’ essays and discover how it can be a measure of writing quality in addition to students’ writing development. 30 writing samples from 2nd year high school students were collected and rated by two raters. Five essays each were selected from the high and low-rated groups and analyzed quantitatively and qualitatively (examined one-by-one in depth). The results from the quantitative analysis showed that the number of lexical cohesive ties did not significantly differ except for synonymy ties. However, an in-depth analysis showed that the quantity of lexical cohesive ties (the amount of lexical cohesive items) did not matter much as much as how the students utilized lexical items to convey a coherent message, showing how well students could express and organize their ideas in their essays.
1 Literature Review
1.1 Lexical Forms and Relations

Writers/Speakers are constantly faced with lexical choices when they produce a text. They choose one lexical item over others, since each lexical item has its own nuances and one with a different nuance may alter the interpretation of the utterance.

In their work, Halliday and Hasan (1976) attempt at describing various types of semantic relationships created by speaker’s/writer’s choice of lexical items. In their first framework of 1976, they propose that these relations should be reiteration and collocation. Later in 1984, they expanded and renewed their framework.

The two main categories that Halliday and Hasan have developed in both 1976 and 1984 are shown in Table 1.

| Table 1 Categories of Lexical Cohesion by Halliday & Hasan (1976; 1984) |
|--------------------------|--------------------------|
| 1. Reiteration           |                          |
| 1/a. same item repetition (girl, girl) | 1. Repetition (leave, leaving, left) |
| 1/b. synonymy and near synonymy (table, desk) | 2. Synonymy (leave, depart) |
| 1/c. subordinate (cat, animal) | 3. Antonymy (leave, arrive) |
| 1/d. “general” item (bear, creature) | 4. Hyponymy (travel, leave) |
| 2. Collocation (I feel cold This room is like ice.) | 5. Meronymy (hand, finger) |
|                          | 6. Instantial relations |
|                          | 6/a. equivalence (the sailor was their daddy) |
|                          | 6/b. naming (the dog was called Toto) |
|                          | 6/c. semblance (the deck was like a pool) |

To the extent the writer/speaker has a good command of various lexical relations, the more developed their discourse will be, since lexical items function in texts by establishing links from one lexical item to another, developing topics and building semantic relationships across texts. McCarthy (1991) notes that it is important for learners to have enough vocabulary items in their mental lexicon to have a good command over these semantic relations: “…the learner needs to have a fairly rich vocabulary, and to have at his/her fingertips the synonyms, antonyms, etc. of the words that are ‘in play’” (p.71).

Below is an extract from an essay written by an English native-speaker from Reynolds’ (1995) data sample, showing a good command of lexical cohesion in his essay. The essay is written on the topic, “Which of the days of the week do you like best? What are your reasons?” (Singly underlined are the repeated items and doubly underlined are the items used for elaboration in the native speaker’s writing sample):
I enjoy each day of the week for different reasons. Though each day is enjoyable, Friday is the best. Friday is the best day of the week because it is the day of the week that gives you so many opportunities to do the things you like doing, it is a time when many special events take place, and it doesn’t have many consequences to suffer for having a good time. […] Another reason for Friday being the best day of the week is that it is a time when many special events take place. Many parties are held on Fridays. High school sports games are quite often played on Friday; and many specials at restaurants, movies and other enjoyable places are offered on Friday. Because of all the events that are offered Friday, it is the best day of week. (single underscore represents lexical repetition; double underscore paraphrase) (Reynolds, 1995, p.198).

The writer not only uses repetition to highlight the reason for his thesis that he stated in his introductory sentence (Friday, the best day of the week, many special events take place), but he elaborates on why he thinks that Friday is the best day of the week by using hyponyms of the word event such as parties and games. He also adds diversity to his essay by using synonyms/near-synonyms of the word take place such as held, played and offered.

Of course, the semantic relations introduced above in Halliday and Hasan’s work are not the only representation of word relationships. McCarthy (1990) presents an example of how one word can be associated to a multitude of links of words that represent the individual’s world knowledge, experiences and episodes (see Figure 1). He gives an example of how he can associate the word war to a variety of concepts, expressed by lexical items.

![Image](image.png)

*Figure 1* Associations to the word war according to McCarthy (1990) (McCarthy, 1990, p.41)

Although these associations may vary among different individuals, this network shows that semantic relations play a role in keeping related concepts organized when using these related words when talking/writing about the same topic.

1.2 Lexical Cohesion/Repetition in Student Writing

Studies which have analyzed essays in terms of the frequency of lexical cohesive items have usually made a comparison between high- and low- rated essays (Witte & Faigley, 1981; Connor, 1984; Stotsky, 1986; Reynolds, 1995; Karoly, 2002). In fact, the participant groups of which the
comparisons were made are various; between high/low rated essays of native speakers, essays of native and non-native speakers, and high/low rated essays of non-native speakers in an EFL setting.

The results have reached nearly similar results; high-rated essays have more lexical ties in terms of frequency (the results vary across studies) and use more different types of lexical cohesion devices other than repetition such as paraphrases, synonyms and collocations. This suggests that a better and wider vocabulary range allow writers to elaborate and extend concepts that they introduce (Connor, 1984). On the other hand, low-rated essays may have fewer lexical ties and mostly use repetition rather than paraphrases, synonyms and collocations.

Furthermore, Reynolds (1995) and Tyler (1994; 1995) both applied Hoey’s (1991) repetition model (see section 2.3.1 for details) to their texts and showed that quantity of repetition is not significant in textual coherence.

From the results of Reynolds’ (1995) and Tyler’s (1994; 1995) studies, it was shown that there are other functions to lexical repetition than creating multiple links or ties. Lexical repetition is used to develop and support the writer’s idea or to mark and track the writer’s idea across the text explicitly to allow the reader to refer back to the original idea.

2. Research Questions

Despite the fact that a number of studies have analyzed essays in terms of lexical cohesion, there are only a handful of studies which analyze lexical cohesion in essays of students studying English as a second language in EFL contexts, such as in Jordan (Shakir, 1991), China (Meisuo, 2000) and Hungary (Karoly, 2002). As for Japanese EFL contexts, there has been scarcely any research on lexical cohesion (or any type of cohesion).

This present study examines lexical cohesion found in high and low rated essays in a Japanese EFL context. The participants are second-year high school students. The characteristics of the lexical resources of high- and low-rated essays will be examined, as well as pedagogical implications for the teaching and assessment of EFL writing.

This study investigates the following questions:

1. Does lexical cohesion contribute to the quality of high school students’ writing?
2. What are the characteristics of good writing in terms of lexical cohesion among high school students?

3. Method

3.1 Participants and Essay Topic

The participants are 30 second-year high school students from a private high school (hereafter, HJ High School) in the western part of Japan. For writing education at HJ High School,
writing classes start from the second year of high school. In the first semester (before summer vacation), the participants enroll in a writing class based on grammar-syllabus (learning grammar necessary for essay writing). For the requirements of the class, students write four short essays throughout the course as assignments.

Every summer, the students are required to write an essay on a single topic to submit to one of the nationwide essay contests in Japan. The participants in the present study wrote an essay of 300 to 600 words on the topic “A letter to myself in the future”, which was the assigned topic for the writing contests hosted by Zen-Ei-Ren. Their writing samples were collected after their summer vacation. The students were allowed to use a dictionary (also a designated rule by Zen-Ei-Ren).

3.2 Rating Procedure

Two raters participated in the rating of the 30 writing samples. One of the raters was Japanese and the other was a native speaker of English from England. Both raters have an experience of teaching writing and rating essays. Table 2 shows their background information (their gender, first language, years of teaching and rating experience). The native speaker will be referred to as Rater A and the Japanese rater as Rater B. Rater A is a university professor in Japan and has taught writing at a Japanese university for six years. Rater B is a teacher at HJ high school teaching writing classes for three years. Both raters have experience in rating/scoring students’ essays.

<table>
<thead>
<tr>
<th>Rater</th>
<th>Gender</th>
<th>First language</th>
<th>Years teaching writing</th>
<th>Rating experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Male</td>
<td>English</td>
<td>6</td>
<td>Yes</td>
</tr>
<tr>
<td>B</td>
<td>Male</td>
<td>Japanese</td>
<td>3</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The raters were asked to rate each essay using a ten-point scale, based on their overall impression. To make the rater’s rating process as explicit as possible (Connor-Linton, 1995), the raters were asked to specify their criteria of rating: what aspect of writing they focused on when rating. Rater A made his criteria based on mechanical errors (grammar, spelling), ideas, and relevance of the idea to the assigned topic. Rater B had his constructed around three variables;

1 Zen-Ei-Ren is short for Zenkoku Engo Kenkyuu Kenkyuu Dantai Rengoukai (全国英語教育研究団体連合会). It is an association that supports English education in Japan and holds nation-wide speaking contests and essay contests for high school students in Japan.
Grammar and Spelling, Organization and Content, and General Overall Impression. He allocated the highest points to Grammar and Spelling (four points), three points for Organization and Content and three points for General Overall Impression.

3.3 Data Analysis Procedure

Ten essays were chosen for analysis from the essays that were marked the five highest and five lowest from both raters. Five high-rated and five low-rated essays chosen for analysis.

The framework of Halliday and Hasan (1976) and Hasan (1984)’s (see Table 1) was referred to when establishing the categories for lexical cohesive devices. Although collocation was excluded in Hasan’s (1984) framework, both collocation and instantial relations were added as semantic relationships in this study, as shown in Table 3. It was considered to be necessary to identify as many semantic relations in high school students’ essays. Although including collocation as a measure of lexical cohesion may be controversial (Karoly, 2002), it was considered that students do choose lexical items that are collocationally cohesive (e.g., biology, laboratory, cell) that do not fall in the other categories (repetition, synonymy, antonymy, meronymy, hyponymy and instantial relations).

Table 3 Categorization of Lexical Cohesion for the Present Study

<table>
<thead>
<tr>
<th>Categories for lexical cohesion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Repetition (leave, leaving, left)</td>
</tr>
<tr>
<td>2. Synonymy (leave, depart)</td>
</tr>
<tr>
<td>3. Antonymy (leave, arrive)</td>
</tr>
<tr>
<td>4. Hyponymy (travel, leave)</td>
</tr>
<tr>
<td>5. Meronymy (hand, finger)</td>
</tr>
<tr>
<td>6. Collocation (winter, ice, cold)</td>
</tr>
<tr>
<td>7. Instantial relations</td>
</tr>
<tr>
<td>6/a. equivalence (the sailor was their daddy)</td>
</tr>
<tr>
<td>6/b. naming (the dog was called Toto)</td>
</tr>
<tr>
<td>6/c. semblance (the deck was like a pool)</td>
</tr>
</tbody>
</table>

The first step for the analysis of lexical cohesive ties involves identifying the items which are in cohesive function and putting them into the appropriate category of either repetition, synonymy, antonymy, hyponymy, meronymy or instantial relations. WordNet Search 3.0 (http://wordnet.princeton.edu) was used to confirm the relationships of synonyms, antonyms, meronyms and hyponyms.
Figure 2 shows a sample of how the relations were counted. In the leftmost column is the sentence number of the sentence which contains the first item. The second column on the left notes the sentence number for the second item. The columns for the first item and second items list the exact items found in the given sentences. The farthest right column is for listing each category type. For example, in Student 4’s first paragraph, there are two cohesive ties connecting study-studying and study-study, in lines 3-4 and 3-6, both categorized as repetition, coded as R.

Student 4

(1)Dear me, what are you doing now? (2)Do you have a job I wanted to? (3)Now I’m seventeen years old, and I want to study biology at university. (4)So I’m studying hard to enter university. (5)My parents worried about my future, are you doing well? (6)And I want to study about cell at laboratory, are you belonging to laboratory?

<table>
<thead>
<tr>
<th>1st sentence</th>
<th>2nd sentence</th>
<th>1st item</th>
<th>2nd item</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>study</td>
<td>studying</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>study</td>
<td>study</td>
<td>R</td>
</tr>
</tbody>
</table>

Figure 2 Example of coding lexical relations

While the quantitative analysis will focus on the frequency of instances of lexical cohesion, for the in-depth analysis of the patterns of lexical cohesion in the essays, the essays were examined one by one. Factors that would be focused on would be: whether the distance between items determines the coherence of the texts, whether the different uses of lexical categories contribute to the quality of good writing, and whether the writers are able to successfully construct interpretable semantic relationships across sentences.

4. Results

4.1 Results of Quantitative Analysis

To show the overall tendency of the quantitative data, Table 4 presents the frequency, mean, percentage and standard deviation of the cohesive ties observed in the two groups. Repetition was the most frequently used category of all in both high- and low-rated essays; of the total 281 lexical cohesive ties used by both high- and low-rated groups, 36% were repetition ties in the high-rated group and about 30% for the low-rated group. Instantial relation ties were the second most used category by both groups (high: 8.01%; low: 5.57%). For the low-rated group, it has turned out that lexical ties other than repetition and instantial ties were not used so much (each tie less than 2%). On the other hand, synonymy and antonymy ties were more prevalent compared to hyponymy,
meronymy and collocation ties for the high-rated group. However, the results vary widely among individuals, as can be seen from the standard deviations.

Table 4  *Frequency, Mean, Percentage and Standard Deviation of Lexical Relations*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freq.</strong></td>
<td>104</td>
<td>17</td>
<td>13</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>Mean</td>
<td>20.8</td>
<td>3.4</td>
<td>2.6</td>
<td>0.8</td>
<td>0.4</td>
<td>1.6</td>
</tr>
<tr>
<td>(N=5)</td>
<td>%</td>
<td>36.24%</td>
<td>5.94%</td>
<td>4.53%</td>
<td>1.39%</td>
<td>0.70%</td>
<td>2.79%</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>6.65</td>
<td>3.26</td>
<td>4.17</td>
<td>0.80</td>
<td>0.80</td>
<td>1.20</td>
<td>1.94</td>
</tr>
<tr>
<td><strong>Freq.</strong></td>
<td>82</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Mean</td>
<td>16.4</td>
<td>0.2</td>
<td>0.6</td>
<td>0.6</td>
<td>0.8</td>
<td>1.2</td>
</tr>
<tr>
<td>(N=5)</td>
<td>%</td>
<td>28.57%</td>
<td>0.35%</td>
<td>1.05%</td>
<td>1.05%</td>
<td>1.39%</td>
<td>2.09%</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>4.45</td>
<td>0.40</td>
<td>1.20</td>
<td>0.80</td>
<td>0.98</td>
<td>1.60</td>
<td>3.29</td>
</tr>
</tbody>
</table>

*Note: Freq.= frequency; Rep.= repetition; Syn.= synonymy; Ant.= antonymy; Hyp.= hyponymy; Mer.= meronymy; Coll.= collocation; Inst.= instantial relations.*

Table 5 focuses on the frequency and percentage of each cohesive tie used by each individual student. Half or more of the ties consist of repetition ties, which is common to all students. Students of the high-rated group seem to use a variety of semantic ties other than repetition compared to those of the low rated group, but the variation among individuals make it hard to reach a generalization.

Table 5  *The Number of Lexical Cohesive Ties within Groups*

<table>
<thead>
<tr>
<th>No.</th>
<th>Rep. (%)</th>
<th>Syn. (%)</th>
<th>Ant. (%)</th>
<th>Hyp. (%)</th>
<th>Mer. (%)</th>
<th>Coll. (%)</th>
<th>Inst. (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>32 (69.6)</td>
<td>2(4.3)</td>
<td>2(4.3)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>3(6.5)</td>
<td>7(15.2)</td>
<td>46(100)</td>
</tr>
<tr>
<td>7</td>
<td>24(68.6)</td>
<td>0(0)</td>
<td>1(2.9)</td>
<td>3(8.6)</td>
<td>0(0)</td>
<td>3(8.6)</td>
<td>4(11.4)</td>
<td>35(100)</td>
</tr>
<tr>
<td>11</td>
<td>13(50)</td>
<td>5(19.2)</td>
<td>0(0)</td>
<td>1(3.8)</td>
<td>2(7.7)</td>
<td>0(0)</td>
<td>5(19.2)</td>
<td>26(100)</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>24</td>
<td>16(66.7)</td>
<td>1(4.2)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>3(14.3)</td>
<td>24(100)</td>
</tr>
<tr>
<td>25</td>
<td>19(47.5)</td>
<td>9(22.5)</td>
<td>10(25)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>2(5)</td>
<td>1(2.5)</td>
<td>40(100)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>104</td>
<td>17</td>
<td>13</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>23</td>
<td>171</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>20.8</td>
<td>3.4</td>
<td>2.6</td>
<td>0.8</td>
<td>0.4</td>
<td>1.6</td>
<td>4.6</td>
<td>34.2</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>6.68</td>
<td>3.26</td>
<td>3.77</td>
<td>1.17</td>
<td>0.80</td>
<td>1.20</td>
<td>2.06</td>
<td>18.94</td>
</tr>
</tbody>
</table>
For instance, Student 4 uses relatively the same amount of synonymy, antonymy and collocation ties (about 4 to 6%). Student 7 does not use any synonymy ties in contrast to Students 11 and 25. Student 11 uses the same amount of synonymy and instantial ties, both constituting about 40% of all the ties. Student 25 also has a relatively high percentage of synonymy ties (22%) compared to other students, as well as antonymy ties (25%). On the other hand, Student 24 does not use ties other than repetition and instantial relations in clear contrast to other students from the high-rated group (only once for synonymy and once for collocation). The infrequency of meronymy ties is a common characteristic to all students in the high-rated group. For the low-rated group, some students use a variety of lexical ties (Students 5 and 8), but other students were similar to Student 24, not exhibiting a wide variation of ties. Especially, synonymy, antonymy and hyponymy ties were not evident in Students 13, 23 and 28’s essays. Meronymy was the only category that was used slightly more than students in the high-rated group (two students in the low-rated group used meronymy ties and only one in the high-rated group).

The results of the Mann-Whitney U Test show a distinguishing factor between the high- and low-rated groups; the category of synonymy show a significant difference in the number of ties between the two groups (p=.044). It seemed to be used by all four students except Student 7 in the high-rated group. On the other hand, only Student 8 uses synonymy in the low-rated group.

Through the quantitative analysis of lexical items, it was shown that the quantity of lexical cohesive ties did not differ so much between the two groups, except for the synonymy ties. In other words, the number of synonymy and repetition ties was a distinguishing factor between good and poor writing. However, the use of other ties than repetition and synonymy widely varied among each student, making it hard to reach to a generalization. Furthermore, some students in the low-rated group like Students 8 and 23 exceeded the total number of ties of students in the
high-rated group, further confirming that the quantitative analysis of lexical ties is insufficient to answer the question of how students use lexical cohesion to write a well-written essay.

4.2 Results of In-depth Analysis

The quantitative analysis proved that the frequency and types of lexical cohesive items vary widely among the essays regardless of good/poor writing, and that a quantitative approach towards examining lexical cohesion may not provide a valid result. All that is left to examine the characteristics of lexical cohesion between high- and low-rated essays is to look at each essay individually and observe if there were any characteristics other than quantity of ties, as previous studies (Reynolds, 1995; Tyler, 1994; 1995) have also shown. As a result, the essays could be categorized into three types of characteristics concerning the pattern of lexical cohesion. Among the ten writing samples, three writing samples, each having these characteristics (Students 4, 5 and 23), will be presented and discussed in further detail.

4.2.1 Student 4

Student 4 got high marks from both Raters A (9 points) and B (9 points); Rater A commented on Student 4’s essay as having “minor mechanical errors and a substantial, interesting message”. Rater B gave 3 points for each of his Grammar and Spelling, Organization and Content, and General Overall Impression sections. According to the raters, Student 4’s essays can be characterized as having an interesting content, good overall impression and having few grammatical errors.

The good message that Student 4 delivers is evidenced in the way she structures her paragraphs; the paragraphs are constructed around her queries about what will happen in the future. This is reflected in her cohesive use of lexical items across paragraphs; the word future is repeated three times throughout her essay (marked with a squared box), being one of the main key words for characterizing her essay as shown on the next page.

Written in bold letters are lexical items that have a cohesive effect in conjunction with other lexical items (repetition, synonomy, hyponymy, antonymy, meronymy, collocation and instantial relations).

Written sample: Student 4

¶1  (1)Dear me, what are you doing now? (2)Do you have a job I wanted to? (3)Now I’m seventeen years old, and I want to study biology at university. (4)So I’m studying hard to enter university. (5)My parents worried about my future, are you doing well? (6)And I want to study about cell at laboratory, are you belonging to laboratory?
And I’m belonging to **softball** club now. Do you play **softball** now? You must continue to play **softball** for your health. Play **softball** by all means when you became an old lady.

By the way, what’s happening in the **world**? Now there are many **wars and disputes** in the **world**. Japan is **safety** in the **world**, but if we go out from Japan, we are likely to have many **dangers**. Are there **dangers** in the **future**? I hope not. I hope all the **people** in the **world** can **live** **safety** and happy. Then, you must begin to **take action**. Do you remember **collecting** for “Peace Village” in Germany in your school days? At that time, you collected as hard as you could. Why don’t you try to **take action** like this? However small your power, you should try it.

And do your **life** became more **convenient** than old days? Now **world technology** is advanced day by day. I think we can **live** more and more **convenient** in the **future**. For example, **robots** are developed and then **people** can **live** more **safety**. And **cars or trains** are developed and then **people** can move place to place more smoothly and **safety**. What became in the **future** actually?

But I’m **worried** about that the more **life** become **convenient**, the weaker **people**’s relation.

You try to communicate with many **people**.

I’m **still seventeen years old**, but soon catch up with you and it will be my turn. Then, I will make my history. See you again.

4.2.2 Student 5

Rater A gave Student 5’s essays 4 points and Rater B, 5 points. The common feature that was pointed out by both raters was that the essay has no paragraph structure and is written more like a list than an essay. As with the content, there are parts that cannot be interpreted correctly, especially the subject of the essays and pronouns, as Rater B pointed out.

It seems as if Student 5 has a variety of things to express, but cannot arrange her thoughts in organized paragraphs. First she talks about music and her favorite singers, but then quickly changes her topic about the heat disorder, environmental problems and about herself in the future. This frequent change in topic is reflected in her use of lexical cohesive ties; there are no consistent lexical items that mark the message of the essay, like those in high-rated essays. The lexical ties are more local than global, resulting in a frequent change of topic with no commonality (the words that are repeated more than three times are marked with bold letters, squared, underlined and italicized).
The most repeated word is value (valued/valuing) in lines 30, 31, 34, 35, but it does not function as a topic-related key word.

Written sample: Student 5
(1) Dear Y,
(2) How do you spend it?
(3) I am 16-year-old summer vacation now.
(4) My family and my friend are very well.
(5) I fight something every day.
(6) For example, homework, tests and Cram school.
(7) It cannot be helped because the student.
(8) I like softball, books, song and Air conditioner.
(9) Especially I like Rock music of Japan.
(10) A favorite singers are flumpool, YUI, and NICO TOUCH THE WALL.
(11) We becomes Heat Disorder if there is no air conditioner.
(12) The air conditioner is necessary when I am in the house.
(13) I don’t like too sweet cakes, sunlight and the study.
(14) Too sweet cakes make me a metabolic syndrome.
(15) This time, sunlight is terrible and painful.
(16) Sunlight causes darkening of the skin.
(17) Well, how about me in the future?
(18) Do you live happily?
(19) What do you do?
(20) Am I single?
(21) Is a favorite thing done?
(22) Do you live in Hiroshima?
(23) How will be the family and friends in the future?
(24) Are no one sick?
(25) How do environmental problems in the future?
(26) Does the surface of the sea rise?
(27) Does the earthquake occur?
(28) Is there a favorite person?
(29) Is there a person who says that it will like it?
(30) Is there a person who is valuing it?
(31) Is there a person who thinks valuing?
(32) Is there a friend who can rely on?
(33) Myself relied on?
(34) Is a surrounding person valued?
(35) Is it valued by a surrounding person?

4.2.3 Student 23

Student 23’s essay was the highest marked essays in the low-rated group (Rater A: 5, Rater B: 6) and close to the middle-rated group. Rater A commented that the essay has minor mechanical errors that detract from the message and ideas lack freshness. Although Rater B comments that there are minor grammatical errors (2 points for Grammar & Spelling), he also points out that the argument lacks logic (2 points for Organization & Content, and 2 for General Overall Impression).

It may be said that Student 23’s is situated in the middle of the high and low-rated group in terms of the pattern of lexical cohesion; she has both the features of essays from the high- and low-rated groups.

Her main topic is about her school life as she mentions in line 6. She uses collocates to elaborate on her episodes about school life, using the words such as club, teacher, study, close friend (marked in squared boxes), so that the reader can follow her topic development. Furthermore, her subtopics for each paragraph are her club activity (part leader, part, my club), studying hard (study, studies, study hard, teacher), and having close friends (close friends, supported, school). It can be assumed that all of her subtopics are about her life in school (the words that mark the subtopic in paragraphs are in bold letters).

The difference between her essay and the essays in the high-rated group is that her elaboration is insufficient just as in Student 13’s essay. She lacks elaboration of her episodes, which was what Rater B pointed out (her reasoning is not enough). One of the reasons is that she lacks the variation of lexical items and lexical cohesive ties that the students who wrote high-rated essays used to elaborate their episodes. She only uses an average of two lexical items in each paragraph to elaborate on her topic of “school life” (e.g., study and teacher in paragraph 3, close friends and supported in paragraph 4). This may be the reason why Rater A characterized her essay as having no freshness in idea.

In the last paragraph, she also fails to connect all of her subtopics and develop a conclusion, due to the fact that she abruptly turns to talking about her dream, irrelevant from her school life.

Written sample: Student 23
(1) Hello, the future of me. (2) What will I do in the future? (3) I am very interesting that. (4) Now I am in the 11th grade student. (5) I enjoy the school life and I hang on what I am compatible club and study. (6) Let me tell the future of me about the present school life.

(7) In club I am the oldest. (8) I am a part leader now. (9) So I must practice harder, and I must support my part, I must teach the skill to my part members. (10) The other day, I took part in nation connention. (11) Though I was not a part leader then, I practiced very hard. (12) And we won the second place. (13) I was very glad. (14) I like my club. (15) Though my club is very hard, it is worth doing.

(16) Now I also study moderately. (17) More and more difficult, harder and harder I must study. (18) I do not like study. (19) But teacher say, “study hard, the 11th grade is most important.” (20) So I think that I become more and more interested in studies, because I have the university which I want to go.

(21) Then I have some close friend now. (22) I like them very much. (23) I talk them many things, and they talk me anything. (24) I am supported by them. (25) When I am in trouble, they always supported me. (26) When I am happy, they have jointly some feelings. (27) But for such close friends, I do not go to school every day. (28) I always thank for them.

(29) Now I spend my school life while I am doing things worth doing, I communicate with some close friends. (30) What will the future of me do? (31) I have a dream now. (32) Will I grant my dream? (33) I want to grand my dream very much. (34) If I will not grant it what will I do? (35) Like now, will I do things worth doing? (36) Will I think that some close friends are important? (37) I expect the future of me.

5. Discussion

Through the results of the present analysis, it may be hypothesized that there is a developmental sequence of using lexical cohesion to organize ideas in essays. In other words, a good exhibition of lexical cohesion is one of the conditions of an organized, well-written essay. At first, the writers start from developing small subtopics around the assigned topic (A letter to myself in the future). As the writers are more developed in their writing, they can plan a common coherent topic that is common to all topics. The next step is to elaborate those ideas in detail. Although this whole process may be a subconscious act or just a matter of whether students set aside planning time before writing, it was a clear distinction between high and low-rated essays.
Table 6 summarizes the characteristics of the three patterns of lexical cohesion, corresponding to three different writing skills: expressing, connecting and elaborating ideas. Students from the group of low-rated essays are able to develop each idea by using subtopic related vocabulary, but fail the task to connect and relate their ideas to the main topic by using topic-related vocabulary (e.g., Student 5; grouped as Low 2 in Table 6). The students in the next level are able to organize the ideas in a coherent way by using topic-related vocabulary (e.g., Student 23; Low 1). However, in this stage, they are not fully able to elaborate on their ideas more in detail. This makes their arguments seem redundant. In the high-rated group, the students were able to elaborate their ideas by using various lexical items and creating semantic relations (e.g., Student 4; High). As a result, their essay had a clear message (topic-related vocabulary), related episodes (subtopic-related vocabulary), and diverse lexical items to elaborate on their episodes.

<table>
<thead>
<tr>
<th></th>
<th>Express ideas (Subtopic)</th>
<th>Connect ideas (Topic)</th>
<th>Elaborate ideas (lexical diversity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Low 1</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Low 2</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

It may also be suggested that the students are in the developmental stage of using text-forming relationships (synonymy, hyponymy, meronymy, antonymy, collocations). As Stotsky (1983) states, these text-forming relationships require intellectual operations, such as classifying, categorizing, noting similarities or differences, which in themselves do not need to be taught. These lexical choices gradually develop naturally as the student acquires their second language (Ferris, 1994). Students from the high-rated group invariably could use synonyms, but there was a variation between them with regard to the use of other semantic relations, especially antonymy, hyponymy and meronymy.

6. Conclusion

This study has investigated the two aspects of lexical cohesion in Japanese high school students’ descriptive essays; one was to figure out the distinguishing characteristics between high- and low-rated essays concerning lexical cohesion. The other was to investigate how lexical cohesion can contribute to the quality of writing.

As previous studies have shown, little difference was found in the amount of lexical cohesive ties through the quantitative analysis. As for the type of lexical cohesive ties, only synonymy ties
showed a statistical significance, distinguishing between the two groups. However, the types of ties seem to vary with each individual regardless of their group, making it hard to make generalizations.

On the other hand, results of the in-depth analysis carried out on each essay indicated that high- and low-rated essays had different patterns of lexical cohesion in their essays, affecting the coherence of their message as a whole. Writers of high-rated essays constructed their coherent message with a lexical chain of core lexical items that ran throughout the paragraphs, signaling the topic of their essay. For instance, when a students’ message is about wanting to become a nurse in the future and her episodes are related to that topic, the word *nurse* would be repeated throughout the paragraphs, showing that the writer is staying on the topic. However, although some students in the low-rated group did have lexical chains of the same word running across their essays, they did not appear to succeed in getting their message across to the reader. This was another distinguishing factor between the groups, which was whether or not they could elaborate their episodes with a variety of lexical items using various semantic relations. This is a natural phenomenon, as more and different kinds of cohesive ties can be created by the use of a larger number of different words per sentence and per paragraph (Stosky, 1983). Students in low-rated group had few lexical items that elaborated the episodes; some used the same lexical items repeatedly, having redundancy in their message.

This study concludes by suggesting that lexical cohesion could be an indicator of the development of writing skills to organize and express ideas into a coherent essay. Since each lexical item carries a message, the writer’s correct or incorrect lexical choices affect the conveyed message. Even if the writer can organize ideas in a single paragraph, it would be more of a challenge when writing longer essays, since this requires the writer to connect old and new information across long stretches of text.

This organizing skill may develop in time as learners become proficient in second language writing, but as a first step, teachers could encourage students’ awareness of lexical cohesion and correct lexical choices in short stretches of text.

References


The Effects of Comic Strip on Reading Comprehension among Japanese Junior High School EFL learners

Hiromi Kobayashi

1. Introduction

1.1 Background

EFL reading materials, especially for young learners, include some illustrations or pictures with the text. Those visual aids provide more concrete images of the story for the EFL learners. The learners get some clues for unknown words through pictures in reading.

There are a number of studies on how visual aids can improve reading recall in L1. However, few studies have examined the functions of visual materials in the context of assessment for L2 learners in reading and written recall.

Benson and Cummins (2000) introduced one of the retelling methods with wordless books in which the beginners construct the meaning of the story from the illustrations. Retelling with illustrations expands the contextualized setting; meaning can be interpreted through the clues provided with the illustrations. In the process, the illustrations become part of memory, and then the learners construct and activate the story structure and retell the story with their own words.

The present study examines both reading comprehension and written retelling with the comic strips as a visual aid. Furthermore, the study investigated how the learners gained information from the text alone or the text with a comic strip based on the Dual Coding theory (Paivio, 1986).

1.2 Previous Studies

Recent research on the effects of visual aids on reading comprehension by Liu (2004) and other previous researchers (e.g. Levis & Lents, 1982) pointed out major positive functions. Liu (2004, p. 226) mentioned five major points for using visual aids in reading as follows: 1) representation, 2) organization, 3) interpretation, 4) transformation and 5) decoration. More specifically, visuals repeat the text’s content or overlap with text as for “representation”. “Organization” implies that visuals enhance the text’s coherence. Visuals provide the reader with more concrete information as “interpretation”. “Transformation” facilitates the critical information in the text and records it in a more memorable form. Lastly, “decoration” facilitates interests toward the text for the readers. Thus, visual aids provide text redundant information as well as the visual fact that can sometimes be used as effective or efficient substitutes for extra linguistic information.
Illustrations usually enhance learners’ enjoyment, motivate low proficiency learners in reading and change the learners’ attitudes toward reading because illustrations have spatial information, which is difficult to explain in words (Levie and Lents, 1982). Visuals should reflect the text’s linguistic complexity and activate the linguistic input and output (Liu, 2004).

Several empirical studies (Hou, 2006, Hudson, 1982) proved that visual materials facilitated L2 reading comprehension. Liu (2004) and Hou (2006) conducted their studies toward college EFL students in the United States. The findings showed that the text with visual aids enhanced the performance for low-proficiency level students but had little effect on the performance for high-level participants (Liu, 2004). Similarly, How (2006) conducted the study with the storyboards with two types of texts; the elaborated story and the non-elaborated story. Hou (2006) did not divide into two proficiency levels. The results showed that the participants in the non-elaborate story group with storyboard scored significantly higher than those who in the non-elaborate story group without storyboard visuals. Both studies for EFL college students in the US indicated that the visual aids influenced the reading comprehension.

1.3 Related Studies (DCT & Working Memory)

Numerous studies were conducted to investigate the relationship between visual and verbal information. Paivio (1971) proposed the Dual Coding Theory (DCT) as a part of Cognitive Information Processing. Figure 1 describes the DCT system. The DCT implies that both visual and verbal modes of mental representation are connected in the human mind. Thus, the mind has two cognitive subsystems; one is for processing of nonverbal objects or events, and the other is for dealing with language. The links between the two systems are called referential connections in which verbal and imagery codes correspond to each other to operate for imaging words and naming from pictures. The verbal system is organized sequentially and the visual system is not organized sequentially. However, both visual and verbal codes for represented information integrate incoming information with knowledge that can be stored in the human mind as memory. The verbal system and visual (nonverbal) system also can be regarded as the linguistic coding system and imagery system respectively (Clark and Paivio, 1991).
The mechanisms of DCT have been studied in the L1 reading rather than in the L2 reading.

![Diagram of Dual Coding Theory]

**1.4 Bottom-up and Top-down Processes in EFL reading**

In reading, readers are assumed to use two processes to understand the text; top-down and bottom-up processes. Smith (1978) emphasized the importance to see an interactive process between the reader and the text. In reading, the context of the text plays an important role in constructing meaning and comprehension.

Furthermore, Randall (2007) indicated the importance of full contextual understanding related to the readers’ memory. The research of the recall test showed that L1 readers tended to remember the content of the information rather than the actual form of sentences. From these points, the good L1 readers use top-down schema for interpreting texts with well-established word recognition skills. However, it is not an automatic procedure for L2 readers. In general, L2 learners tend to pay more attention toward bottom-up procedures, which includes grapheme, morphological, phonological and syntactic levels (Carroll, 2008). These factors restrict the L2 readers from using top-down processing, though they tend to analyze the text from wider perspectives by using both bottom-up and top-down processes. It is not only the case that the reader is not aware of the processes of using top-down information in comprehension, but such procedures may be impossible to implement because of the limited capacity of working memory toward the tasks of the target language (Randall, 2007).
Thus, the beginners of L2 learners have limited working memory capacities due to the lack of linguistic knowledge. Rigway (1997) examined that the low proficiency readers needed to devote more processing capacity toward formal features of the text.

The distinction between top-down and bottom-up processing is similar to the information process in Dual Coding theory (Paivio, 1986). Regarding top-down processes, visual information is perceived in parallel ways since the pictures contain the context of the story or the situation of the text. DCT provides more specific account of meaning, coherence, and inference effects. On the other hand, linguistic information proceeds in a serial way similar to the bottom up process, in which language units have mentally representations and organizations (Liu, 2004).

1.5 Aims of this study

The main purpose of this present study is to investigate the effects of comic strips with the text for the beginner Japanese Junior High school EFL students. The participants read the story with or without the comic strips. Then, they recall the story without the text in a written retelling task. In the written retelling task, reading comprehension, immediate recall protocols, lexical richness and propositional representations were measured. The lexical richness is a measure of how many different words are used in a text. While, the propositional representations are a unit of meaning consisting of two or more concepts that are represented in discourse memory of the meaning apart from the exact words used (Carroll, 2008).

The students have been learning English for only a year and a half since they entered junior high school. They have less than a rudimentary understanding knowledge of English. The present study also attempts to present possible teaching methods to improve reading comprehension and retelling skills of Japanese Junior High school EFL learners.

2. Methods

2.1 Participants

The participants of this study were 120 female students out of 176 second grade of junior high school students at one of the private schools in Tokyo, Japan. The participants were native Japanese speakers. English is a mandatory subject for all students who are required to take English lessons four hours a week. A regular class consists of approximately 20 students and runs for 45 minutes. The participants were divided into two proficiency levels; high and low based on by the Benesse test. As for the criteria of the high proficiency groups, the highest scoring 30 students of the Benesse test were chosen. The lowest scoring 30 students of the Benesse test were designated as the low proficiency level groups. Each group consisted of 30 students. Four groups were set up for the present study. The criteria of the high and low proficiency groups were
based on the T-Scores level of the Benesse test. The four groups are categorized as below with the result of the T-Score level of the Benesse test.

- T1, low-level text-only material (T-Score: Average, 40.72)
- T2, low-level text with the comic strip (T-Score: Average, 40.59)
- T3, high-level text-only material (T-Score: Average, 60.27)
- T4, high-level text with the comic strip (T-Score: Average, 59.38)

2.2 Materials

Reading material for this present study was selected from *Introductory stories for reproduction* 2 (Hill, 1982). The text has 155 words and consists of 15 sentences with a mean sentence length of 10.3 words. The comic strips were presented with each paragraph of the text. On the other hand, the text-only material groups used the text without the comic strip.

2.3 Procedures

The data was collected within a three-week span from eight classes with five English teachers during the regular class time.

Firstly, the participants read the text (10 minutes), then did the written retelling task in L2 (15 minutes), and answered reading comprehension questions (5 minutes) in L1 at the end.

The data of the written retelling was measured using Immediate Recall Protocols (IRP), which is a post reading task for testing participants’ reading comprehension without the help of other materials. The IRP is the direct method of the interaction between reader and text (Johnston, 1983). Bernhardt (1991) claimed that IRP was one of the assessments to determine the reader’s encoding information and comprehension of the text coherently and logically.

2.4 Research Hypothesis

The following research hypotheses were based on the consideration of the findings from the previous studies (Hou, 2006, Liu, 2004). Hypothesis 1 and 2 were concerned with the effects of comic strip in reading and written retelling. Hypothesis 3 and 4 were the assumptions for the trends toward the low proficiency learners in reading and written retelling.

Hypothesis 1: The comic strip as a visual aid facilitates reading comprehension.

Hypothesis 2: The comic strip as a visual aid strengthens retention. Therefore, the learners can retell the story more than the text only material groups.

Hypothesis 3: The comic strip facilitates linking unknown words and phrases to images in reading. Therefore, the low proficiency learners comprehend the text more easily with the comic strip.
Hypothesis 4: The comic strip helps the low proficiency learners to retell the story in writing.

2.5 Data Analysis

The data was categorized into two parts; the IRPs and the reading comprehension test. The written IRPs were scored by two language teachers (the present researcher and another teacher, who teaches English conversation to the same students). The recall protocols were assessed by four points. The value of each level is as follows:

4= retell the story in detail, 60% to 80% of the story.
3= retell the story generally but not in detail, 40% to 60% of the story.
2= retell the story minimally, 10% to 40% of the story.
1= retell the story with trivial or subordinate information.

In addition, the recall protocols were investigated by counting lexical richness and propositional representations. In order to measure the lexical richness, TTR (Type / Token) is more reliable when the same level learners produce the same amount of tokens (Mizumoto, 2005). However, there was a significant difference in the proficiency levels between the low and the high groups in the study. There was a significant difference in the length of the IRPs depending on their proficiency levels. TTR is appropriate to use when comparing texts of equal length (Helml, et all, 2007; Johansson, 2008; Vermeer, 2000). Therefore, Guiraud and D (Type/√Token) was used as a measurement for the lexical richness for the present study.

As for the propositional analysis, the present researchers counted propositional representations as a unit of meaning in each written retelling task. The participants had just learned the simple structures of English and therefore could not produce complex and compound sentences. Therefore, the present researchers counted the unit including “subject and verb”, “subject, verb and object”, or “subject, verb and compliment” as a propositional unit (Table 1). The spelling mistakes and grammatical mistakes were ignored in counting the propositional units.

<table>
<thead>
<tr>
<th>Example 1</th>
<th>P. 5</th>
<th>P. = the number of propositional representations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It was very hot today.</td>
<td>2. Mr Brown close his shop.</td>
<td>3. He went to bus stop.</td>
</tr>
<tr>
<td>4. A small boy came--- in the street.</td>
<td>5. And he followed Mr Brown.</td>
<td></td>
</tr>
</tbody>
</table>

Example 2. P. = 0

Mr. Brown five thirty There isn't
3. Result

The results of the present study encompassed four areas: the reading comprehension test, the IRPs (Immediate Recall Protocols) for written retelling, the lexical richness (Guirand and D) and the propositional representations with mean scores and SD.

Since the participants were beginner learners of English, the data were submitted to a two-way ANOVA to see significant differences of the proficiency levels and the interactional effects between the text-only material groups and the text with the comic strip.

3.1 Results of the reading comprehension test

**Table 2.1** Participants’ mean scores on the reading comprehension test

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Proficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>5.567</td>
<td>2.155</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>4.333</td>
<td>1.989</td>
</tr>
<tr>
<td>Low Proficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>5.200</td>
<td>2.104</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>3.167</td>
<td>1.368</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>120</td>
<td>18.267</td>
<td>7.616</td>
</tr>
</tbody>
</table>

**Figure 2.** Participants’ mean scores on reading comprehension

Note. HP=high proficiency group, LP =low proficiency group, TV=text and visual aids (comic strip), T= text-only material

The mean scores on the 10-item reading comprehension test displayed that the students in both the high and low proficiency groups who read the text with the comic strip scored higher than those who read the text-only material. The high proficiency group, who read the text with the comic strip showed the highest score ($M=5.567$, $SD=2.155$). Whereas, the text-only material group
resulted \( (M = 4.333, SD = 1.989) \). In the low proficiency groups, the students who read the text with the comic strip \( (M=4.333, SD = 2.104) \) performed better than those read the text-only material \( (M=3.167, SD = 1.368) \).

Table 2.2 Two-way ANOVA of participants’ performance on reading comprehension

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>Sum of square</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3</td>
<td>132.167</td>
<td>44.056</td>
<td>11.212</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>1</td>
<td>2632.033</td>
<td>2632.033</td>
<td>669.846</td>
<td>.000</td>
</tr>
<tr>
<td>HL (High/ Low)</td>
<td>1</td>
<td>24.3</td>
<td>24.3</td>
<td>6.184</td>
<td>.014*</td>
</tr>
<tr>
<td>TVT (Text with Visual/ Text)</td>
<td>1</td>
<td>104.533</td>
<td>104.533</td>
<td>26.603</td>
<td>.000**</td>
</tr>
<tr>
<td>HL*TVT</td>
<td>1</td>
<td>3.333</td>
<td>3.333</td>
<td>.848</td>
<td>.359</td>
</tr>
<tr>
<td>Error</td>
<td>116</td>
<td>455.8</td>
<td>3.929</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>3220</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td>119</td>
<td>587.967</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.2 displayed the results of two-way ANOVA analysis on reading comprehension test. The high proficiency level students tended to score significantly higher overall than the low proficiency level students, thus confirming the effects of the different levels, \( F (1,119) = 6.184, p = .014 \). The text with the comic strip had significant effect on the reading comprehension. The result of the reading test showed that the text with the comic strip was easier to comprehend, \( F (1,119) = 26.603, p = .000 \). However, there was a non-significant main effect of the interaction between the proficiency levels and the text with or without the comic strip, \( F (1,119) = .848, p = .359 \). This indicated that the students read the text with the comic strip better, regardless of their level.
Table 3.1  Participants’ mean scores on the Immediate Recall Protocols for written retelling task (4 scales rate)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Proficiency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>2.367</td>
<td>0.785</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>2.017</td>
<td>0.88</td>
</tr>
<tr>
<td><strong>Low Proficiency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>2.167</td>
<td>0.82</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>1.65</td>
<td>0.594</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>120</td>
<td>8.201</td>
<td>3.079</td>
</tr>
</tbody>
</table>

*Note.* $r = 0.78$, $p = 0.000$, $p < 0.5$

**Figure 3** Participants’ mean scores on the Immediate Recall Protocols for written retelling task (4 scales rate)

Note. HP=high proficiency group, LP =low proficiency group, TV=text and visual aids (comic strip),  T= text-only material

The participants’ written IRPs were scored by two English teachers. There was a significant positive inter-rater reliability between the present researcher and the English instructor ($r = .78$, $p=0.000$).

The results of the Immediate Recall Protocols for the written retelling task also indicated that the text with the comic strip groups in both levels scored higher than the text-only groups (Table 3.1). In the high proficiency group, the text with the comic strip group showed ($M=2.367$, $SD = 0.785$), while the text-only group scored slightly lower than the text with the comic strip ($M=2.017$, $SD = 0.88$). In the low proficiency groups, the students who read the text with the comic strip recalled significantly higher ($M=2.167$, $SD = 0.82$) than in the text-only material groups ($M=1.65$, $SD=0.594$).
Table 3.2  Two-way ANOVA of participants’ performance on the Immediate Recall Protocols for written retelling task (4 scales)

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>Sum of square</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3</td>
<td>8.250</td>
<td>2.750</td>
<td>4.403</td>
<td>.006</td>
</tr>
<tr>
<td>Intercept</td>
<td>1</td>
<td>504.3</td>
<td>504.3000</td>
<td>807.437</td>
<td>.000</td>
</tr>
<tr>
<td>HL (High/ Low)</td>
<td>1</td>
<td>5.633</td>
<td>5.633</td>
<td>9.020</td>
<td>.003**</td>
</tr>
<tr>
<td>TVT (Text with Visual/Text)</td>
<td>1</td>
<td>2.408</td>
<td>2.408</td>
<td>3.856</td>
<td>.052*</td>
</tr>
<tr>
<td>HL*TVT</td>
<td>1</td>
<td>.208</td>
<td>.208</td>
<td>.334</td>
<td>.565</td>
</tr>
<tr>
<td>Error</td>
<td>116</td>
<td>72.450</td>
<td>.625</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>585.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td>119</td>
<td>80.700</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2 displays the results of two-way ANOVA analysis on the IRPs. There was a significant main effect of the proficiency levels between the high and low groups on the IRPs, \( F (1,119) = 9.020, p = .003 \). However, there was a slightly significant difference between the text with the comic strip and the text-only material groups, \( F (1,119) = 3.856, p = .052 \). Finally, there was a non-significant main effect of the interactions between the proficiency levels and the text with or without the comic strip, \( F (1,119) = .334, p = .565 \).

Table 4.1  Participants’ mean scores of the lexical richness on the IRP (Guiraud and D)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Proficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>4.077</td>
<td>0.751</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>4.053</td>
<td>1.112</td>
</tr>
<tr>
<td>Low Proficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>3.658</td>
<td>1.007</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>3.726</td>
<td>0.887</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>15.514</td>
<td>3.757</td>
</tr>
</tbody>
</table>
In order to analyze the results of the Immediate Recall Protocols, the written retelling tasks were analyzed from two perspectives: lexical richness by Guiraud and D and the propositions. The result of the lexical richness showed that both groups’ IRPs were scored similarly in the high proficiency levels; the text with the comic strip ($M=4.077$, $SD=0.751$), the text-only material group ($M=4.053$, $SD=1.112$) (Table 4.1). On the other hand, as it can be seen in Table 4.1, the two groups of the low proficiency level, the text-only material group scored slightly higher than the text with the comic strip; the text-only material group ($M=3.726$, $SD=0.887$), the text with the comic strip group ($M=3.658$, $SD=1.007$) (Table 4.1).

### Table 4.2 Two-way ANOVA of Participants’ Performance on lexical richness (Guiraud and D)

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>Sum of square</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3</td>
<td>4.248</td>
<td>1.416</td>
<td>1.521</td>
<td>.213</td>
</tr>
<tr>
<td>Intercept</td>
<td>1</td>
<td>1805.139</td>
<td>1805.139</td>
<td>1938.470</td>
<td>.000</td>
</tr>
<tr>
<td>HL (High / Low )</td>
<td>1</td>
<td>4.170</td>
<td>4.170</td>
<td>4.478</td>
<td>.036*</td>
</tr>
<tr>
<td>TVT</td>
<td>1</td>
<td>0.14</td>
<td>0.014</td>
<td>0.015</td>
<td>.903</td>
</tr>
<tr>
<td>(Text with Visual / Text)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HL*TVT</td>
<td>1</td>
<td>.064</td>
<td>.064</td>
<td>.069</td>
<td>.793</td>
</tr>
<tr>
<td>Error</td>
<td>116</td>
<td>108.021</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>1917.409</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td>119</td>
<td>112.269</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 displays the results of two-way ANOVA analysis on lexical richness (Guiraud and D). With regards to the lexical richness, there was a significant main effect of the proficiency groups between the high and low proficiency levels, $F(1,119) = 4.478, p = .036$. However, there was a
non-significant main effect between the text with the comic strip and the text-only material groups, $F = (1,119) = .015, p=.903$. In addition, there was not a significant effect in the interaction between the proficiency levels and the texts with or without the comic strip, $F (1,119) =.069, p=.793$.

Table 5.1 Participants’ mean scores of the propositional representations on the IRPs

<table>
<thead>
<tr>
<th>Group</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Proficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>4.567</td>
<td>3.313</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>3.167</td>
<td>3.174</td>
</tr>
<tr>
<td>Low Proficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text and comic strip</td>
<td>30</td>
<td>3.367</td>
<td>2.787</td>
</tr>
<tr>
<td>Text</td>
<td>30</td>
<td>1.500</td>
<td>0.957</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>12.601</td>
<td>10.231</td>
</tr>
</tbody>
</table>

Figure 5 Participants’ mean scores of the propositional representations on the IRPs

Note. HP=high proficiency group, LP =low proficiency group, TV=text and visual aids (comic strip), T=text-only material

The results of the propositional representations also showed that the comic strip groups scored higher than the text-only material groups (Table 4.1). In the high proficiency groups, the text with the comic strip ($M= 4.567, SD = 3.313$) scored slightly higher than the text-only material group ($M= 3.167, SD = 3.174$). On the other hand, there was a significant difference between the text with the comics strip and the text-only material group in the low proficiency groups; the text with comic strip ($M= 3.367, SD = 2.787$), the text-only material group ($M= 1.500, SD = 0.957$).
Table 5.2  Two-way ANOVA of participants’ performance on propositions on the IRPs

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>Sum of square</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3</td>
<td>143.300</td>
<td>47.767</td>
<td>6.212</td>
<td>.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>1</td>
<td>1190.700</td>
<td>1190.700</td>
<td>154.844</td>
<td>.000</td>
</tr>
<tr>
<td>HL (High / Low)</td>
<td>1</td>
<td>80.033</td>
<td>80.033</td>
<td>10.408</td>
<td>.002*</td>
</tr>
<tr>
<td>TVT (Text with Visual/ Text)</td>
<td>1</td>
<td>61.633</td>
<td>61.633</td>
<td>8.015</td>
<td>.005*</td>
</tr>
<tr>
<td>HL*TVT</td>
<td>1</td>
<td>1.633</td>
<td>1.633</td>
<td>.212</td>
<td>.646</td>
</tr>
<tr>
<td>Error</td>
<td>116</td>
<td>7.690</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.2 displayed the results of two-way ANOVA on participants’ performance on propositional representations on the IRPs. There was a significant main effect of the proficiency levels between the high and the low proficiency level groups, $F(1,119) = 10.408$, $p = .002$. In addition, there was a significant effect between the text with the comic strip and the text-only material groups, $F(1,119) = 8.015$, $p = .005$. However, there was a non-significant effect of the interactions between the proficiency levels and the texts with or without the comic strip, $F(1,119) = .212$, $p = .646$.

4. Discussion

The major findings of the present study can be summarized as follows:

1. The comic strip had a significant effect on the reading comprehension test in both the high and the low proficiency groups.

2. In the written retelling task, there was not a significant effect on the lexical richness in both groups; however, significant effects were found in the reading comprehension test, the IRPs, and the propositional representations. Producing more propositional representations implied that the learners increased the meaning units of the text message throughout the text with the comic strip.

3. No interactional effects were found between the proficiency levels and the text types in all areas: the reading comprehension test, the IRPs, the lexical richness and the propositional units.

The findings indicated that the comic strip facilitated reading comprehension. These effects can be explained that the comic strips gave clues for the unknown words and the redundant information toward the story for both high and low proficiency groups. The participants with the comic strip understood the text more than those who read the text only material. Both high and
low proficiency groups with the comic strip showed higher scores in the reading comprehension test and the IRPs. This explanation suggests that the students might pay more attention to the comic strip than the text. Therefore, the low proficiency learners gained more comprehension of the text when it was supported with the comic strip. According to Bernhardt (1991), EFL learners comprehend the text through matching the pictures with the linguistic information such as syntax, inferences, and background knowledge.

On the other hand, the results of the lexical richness would seem to suggest that the high proficiency learners with or without the comic strip produced more lexical richness than the low proficiency learners with the comic strip. This result implied that the high proficiency learners had more sufficient lexical and syntactic knowledge compared to the low proficiency groups. Therefore, there was no significant difference in both groups.

The second possible explanation concerns the relationship between memory and reading comprehension, which is consistent with the result of the written retelling task. Schoeller (2005) indicated that memory and comprehension were closely related to each other. The illustrations can reduce the cognitive load related with complex reasoning tasks based on the mental model theory (Marcus, Cooper and Sweller, 1996). The assumption was that the participants of the present study stored the comic strip in their visual system and integrated it into the verbal system in the process of referential connections in the DCT. Thus, the text with the comic strips made it easier to understand the story than the text-only material for the low proficiency learners in the present study. Text comprehension actualized the potential construction of meaning (Roebuck, 1998). Recall protocols have been employed by the story as a measure of reading comprehension (Appeal and Lantolf, 1994, Bernhardt, 1991a, 1991b).

Furthermore, reading skills are interactively available to process and interpret the text. The interactive parallel processing distributes over a range of parallel systems simultaneously (Waltz and Pollack, 1985). As a result, the interaction between the comic strip and the text showed strong tendencies toward greater comprehension in both the high and the low proficiency groups.

This study implied that the comic strip reduced the cognitive load of L2 learners when it was presented in the text. The readers’ comprehension was facilitated because the comic strip described each scene with the text, which the readers used top down process so as to comprehend and activate the schema of the text.

5. **Pedagogical Implication**

The results of the present study suggest that the usage of visual aids enhance the reading comprehension and written retelling for the beginner level EFL learners. There are various ways of using visual aids; for example, power point projectors and picture charts in classroom teaching.
The visual aids facilitate the learners’ comprehension of the text. However, the teacher should consider the text’s linguistic complexity and the visual information, in which the visual and the text should contain the same information. Using contextualized visual aids in L2 reading, the learners would avoid translating unknown words since the visuals support the meaning of each scene. As a result, the learners would keep on reading or listening only in English, thereby acquiring more input, which would reflect in students’ comprehension in retelling or recall tasks.

Further studies are needed to investigate the advantages of visual aids for EFL learners, not only for the young EFL learners, but also for the adult EFL learners with different types of the text such as science and technology. The effects of visual aids might be different according to the age or the text type. In this present study, a two-way ANOVA was conducted to see any significant differences but a multiple comparison ANOVA could be tested to see more details of the effects of visual aids in reading comprehension and retelling.

References


2012年度春期ASTE例会スケジュール

ASTE第175回例会
講演：英語教育が目指すべき方向性－新学習指導要領と「英語力向上のための5つの提言」
講師：向後秀明（国立教育政策研究所教育課程研究センター教育課程調査官
（併）初等中等教育局教育課程課・国際教育課教科調査官）
日時：2012年4月21日（土） 15：15～16：45
場所：上智大学12号館102教室
＊なお、教育実習事前指導を兼ねていますので、いつもと時間が少し異なっておりますので間違いないようにしてください。

ASTE第176回例会
講演：「Cross-cultural communication and education for international understanding through
English Immersion Camp (EIC)」
講師：篠原辰治（公文教育研究会）
日時：2012年5月12日（土） 15：00～17：00
場所：上智大学12号館201教室

ASTE第177回例会
講演：How to motivate students and how to enhance their potential
～生徒のやる気と可能性を引き出す英語指導～
講師：中村達也（東京都立白鷺高等学校附属中学校）
日時：2012年6月23日（土） 15：00～17：00
場所：上智大学11号館411教室
上智大学他の言語学、応用言語学、言語教育関係のホームページ

1) 上智大学のホームページ  http://www.sophia.ac.jp/

2) 上智大学外国語学部英語学科  HOME PAGE  http://www.info.sophia.ac.jp/engfls/index.html
英語学科が独自に運営しているホームページ。英語学科同窓会(SELDA)ホームページへのリンクもあります。

3) 上智大学外国語学部言語学副専攻監修「言語研究のすすめ」
語学の色々な分野を紹介したエッセイ集です。 http://www.info.sophia.ac.jp/fs/fukusen/gengo/gensusu.htm
なお、2008年3月に、「新言語研究のすすめ」が完成しました。上智大学の丸善で販売しています。

4) 上智大学一般外国語教育センター  http://www.info.sophia.ac.jp/flcenter/

5) 上智大学大学院応用言語学研究会  http://pweb.cc.sophia.ac.jp/linstic/applied/index.html
大学院応用言語学研究会のホームページです。院生が調べた論文の要約、そして、研究会で実施した研究報告等が読めます。

6) CLIL Japan  http://www.cliljapan.org/2011/07/clil%E3%80%80tokyo-2011/
池田先生（上智大学）が運営する日本のCLIL（内容言語統合型学習）のサイト

7) 上智大学国際言語情報研究所（SOLIFIC） http://pweb.cc.sophia.ac.jp/linstic/

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9) NPO小学校英語指導者認定協議会（J-Shine）
民間のNPOとして小学校の英語教育の指導者を認定する組織です。 http://www.j-shine.org/

10) 文部科学省（2011） 国際共通語としての英語力向上のための5つの提言と具体的施策
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11) Asia TEFL
アジア諸国を中心とした初の国際英語教育学会です。 http://www.asiatefl.org/

12) The International Research Foundation for English Education (TIRF)  http://www.tirfonline.org/
TEFL関係の優秀な研究（博士論文を含む）に研究資金を提供しています。
関係の文献表豊富 http://www.tirfonline.org/resources/ の中の Reference Lists は非常に便利

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(2007) 第 1 回小学校英語に関する基本調査（保護者調査）
(2009) 第 1 回中学校英語に関する基本調査報告書【教員調査・生徒調査】
(2011) 第 1 回中学校英語に関する基本調査（教員調査）

14) ARCLE (Action Research Center for Language Education) http://www.arcle.jp/

15) 英検で海外留学 http://www.eiken.or.jp/ryugaku/index.html

16) TOEFL http://www.ets.org/toefl/index.html

ASTE Home Page: http://www.bun-eido.co.jp/ASTE.html

ASTE事務局
〒102－8554 東京都千代田区紀尾井町7－1
上智大学外国語学部英語学科
吉田研作研究室
℡:03-3238-3719
Fax:03-3238-3910
E-mail: yosida-k@sophia.ac.jp